SHARP SERVICE MANUAL

No. 00ZUX370ESSME

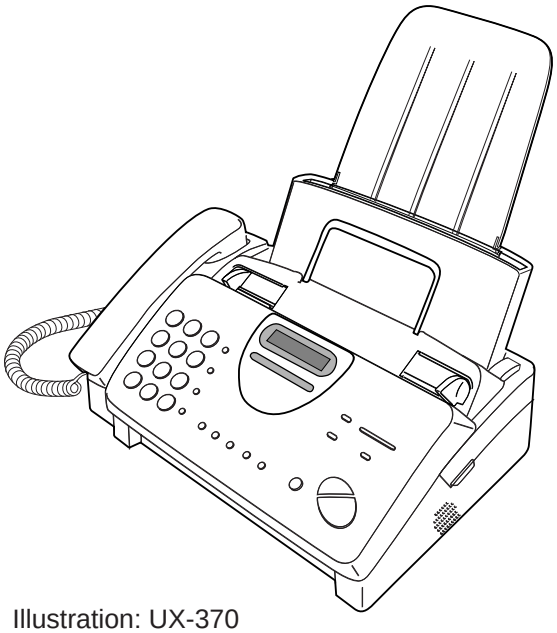

Illustration: UX-370

FACSIMILE

UX-370
MODEL FO-780

SELECTION CODE	COUNTRY
UX-370ES/FO-780ES	Spain
UX-370SE	Sweden
UX-370F	France
FO-780AT	Austria

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Parts marked with "⚠" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's
instructions.

(Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type recommandé par le constructeur.
Mettre au rébut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfare vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CHAPTER 1. GENERAL DESCRIPTION

[1] Specifications

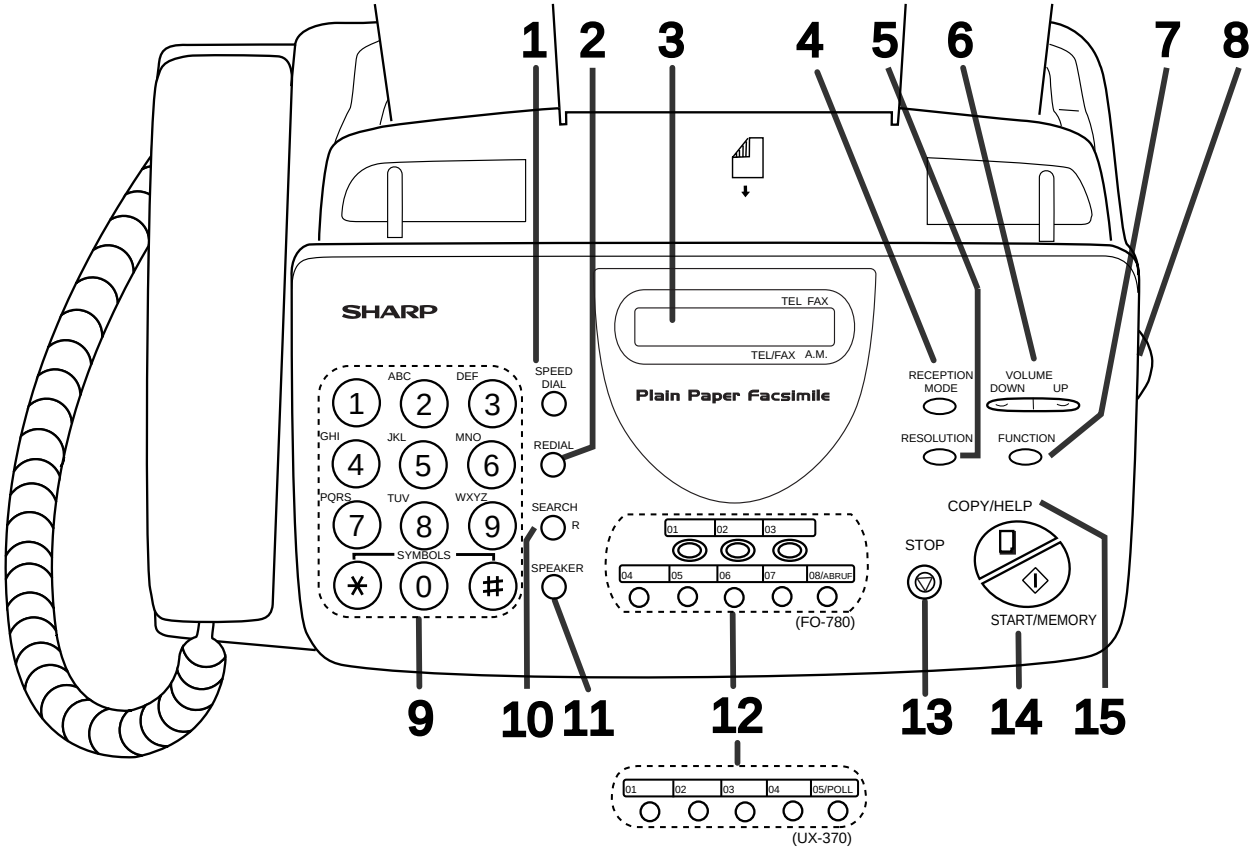
Automatic dialing: (UX-370)	Rapid Key Dialing: 5 numbers Speed Dialing: 40 numbers
Automatic dialing: (FO-780)	Rapid Key Dialing: 8 numbers Speed Dialing: 80 numbers
Imaging film:	**Initial starter roll** (included with fax machine): 10 m roll (approx. 30 A4 pages) **Replacement roll:** **UX-3CR/FO-3CR** 30 m roll (two rolls in package, one roll yields approx. 95 A4 pages)
Automatic document feeder:	10 sheets max.
Memory size*: (FO-780 only)	512 MB (approx. 30 average pages)
Modem speed:	9600 bps with automatic fallback to 7200, 4800, or 2400 bps
Transmission time* :	Approx. 15 seconds (Sharp special mode)
Display:	7 × 5 dots, 1 line by 16-digit display
Reception modes:	FAX, TEL, TEL/FAX, A.M.
Resolution:	Horizontal: 8 dots/mm Vertical: Standard: 3.85 lines/mm Fine/Halftone: 7.7 lines/mm Super fine: 15.4 lines/mm
Recording system:	Thermal transfer recording
Halftone (grayscale):	64 levels
Applicable telephone line:	Public switched telephone network / PBX
Compatibility:	ITU-T (CCITT) G3 mode
Configuration:	Half-duplex, desktop transceiver
Compression scheme:	MH, MR, Sharp
Scanning method:	Sheet-feeder CIS (Contact Image Sensor)
Effective recording width:	204 mm max.
Input document size:	Automatic feeding: Width — 148 to 210 mm Length — 140 to 297 mm Manual feeding: Width — 148 to 210 mm Length — 140 to 600 mm
Effective scanning width:	210 mm max.
Contrast control:	Automatic/Dark selectable
Copy function:	Single/Multi-copy/Sort-copy(99 copies/page)
Telephone function:	Standard (cannot be used for incoming/outgoing if power fails)
Power requirements:	220-230 V AC, 50 Hz
Operating temperature:	5 to 35°C
Humidity:	Maximum: 85 %
Power consumption:	Stand-by: 2.3 W Maximum: 115 W
Dimensions:	Width: 343 mm Depth: 313 mm Height: 312 mm
Weight:	Approx. 3.4 kg

* Based on ITU-T (CCITT) Test Chart #1 at standard resolution in Sharp special mode, excluding time for protocol signals (i.e., ITU-T phase C time only).

Note: The facsimile machine is Year 2000 compliant.

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for procduct improvement without prior notice. The performance specifications figures indicated are nominal values of production units. There may be some deviation from these values in individual units.

[2] Operation panel

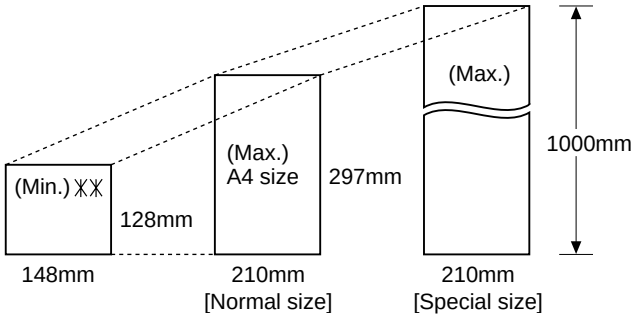


1. **SPEED DIAL key (KURZAHL) (Touche ABREGE) (Tecla MARCACION RAPIDA)**
   Press this key to dial a 2-digit Speed Dial number.
2. **REDIAL key (WAHLWDH.) (Touche BIS) (Tecla RELLAMADA)**
   Press this key to automatically redial the last number dialed.
3. **Display (LCD-Anzeige) (Affichage) (Display de cristal líquido)**
   This displays messages and prompts during operation and programming.
4. **RECEPTION MODE key (EMPFANGSART) (Touche TYPE REPONSE) (MODO DE RECEPCION Tecla)**
   Press this key to select the reception mode. An arrow in the display will point to the currently selected reception mode.
5. **RESOLUTION key (AUFLÖSUNG) (Touche RESOLUTION) (Tecla RESOLUCION)**
   Press this key to adjust the resolution and contrast before sending or copying a document.
6. **VOLUME keys (LAUTSTÄRKE) (Touches VOLUME) (Teclas VOLUMEN)**
   Press these keys to adjust the volume of the speaker when the **SPEAKER** key has been pressed, or the volume of the ringer at all other times.
7. **FUNCTION key (FUNKTION) (Touche FONCTION) (Tecla FUNCION)**
   Press this key to select various special functions.
8. **Panel release (BEDIENFELD ENTRIEGELN) (Ouverture du panneau) (Liberación del panel)**
   Grasp this finger hold and pull toward you to open the operation panel.
9. **Number keys (Zifferntasten) (Touches numériques) (Teclas numéricas)**
   Use these keys to dial numbers, and enter numbers and letters during number/name storing procedures.
10. **SEARCH/R key (ALPHAWAL/R) (Touche RECHERCHE NOM/N°/R) (Tecla BUSQUEDA/R)**
    Press this key to search for an automatic dialing number, or, if you are on a P.B.X. extension, press this key to transfer a call.
11. **SPEAKER key (LAUTSPR.) (Touche HT. PARL) (Tecla ALTAVOZ)**
    Press this key to hear the line and fax tones through the speaker before sending a document, or dialing a voice number.
    Note: **This is not a speakerphone.** You must pick up the handset to talk with the other party.
12. **Rapid Dial keys (Zielwahltasten) (Touches express) (Teclas rápidas)**
    Press one of these keys to dial a fax or voice number automatically. (Note that you must attach the Rapid Key labels.)
13. **STOP key (STOP) (Touche STOP) (Tecla STOP)**
    Press this key to cancel operations before they are completed.
14. **START/MEMORY key (START/SPEICHER) (Touche DEPART/MEMOIRE) (Tecla INICIO/MEMORIA)**
    Press this key to send or receive a document, or to scan a document into memory before sending it.
15. **COPY/HELP key (KOPIE/HILFE) (Touche COPIE/GUIDE) (Tecla COPIA/AYUDA)**
    When a document is in the feeder, press this key to make a copy. At any other time, press this key to print out the Help List, a quick refernce guide to the opeation of your fax.

[3] Transmittable documents

1. Document Sizes

Normal size	width	148 – 210 mm
	length	128 – 297 mm



※※ Use document carrier sheet for smaller documents.

* With special sizes, only one sheet can be fed into the machine at a time. Insert next page into feeder as current page is being scanned.

2. Paper Thickness & Weight

Normal size	ADF 10 sheets	Thickness	0.06–0.09 mm
		Weight	52–80g/m^2 14–20lbs
Special size		Thickness	0.06–0.20 mm
		Weight	52–157g/m^2

3. Document Types

- Normal paper

  Documents handwritten in pencil (No. 2 lead or softer), fountain pen, ball-point pen, or felt-tipped pen can be transmitted.

  Documents of normal contrast duplicated by a copying machine can also be transmitted.
- Diazo copy (blue print)

  Diazo copy documents of a normal contrast may be transmitted.
- Carbon copy

  A carbon copy may be transmitted if its contrast is normal.

4. Cautions on Transmitting Documents

- Documents written in yellow, greenish yellow, or light blue ink cannot be transmitted.
- Ink, glue, and correcting fluid on documents must be dry before the documents can be transmitted.
- All clips, staples and pins must be removed from documents before transmission.
- Patched (taped) documents should be copied first on a copier and then the copies used for transmission.
- All documents should be fanned before insertion into the feeder to prevent possible double feeds.

5. Automatic Document Feeder Capacity

Number of pages that can be placed into the feeder at anytime is as follows:

Normal size: max. ADF 10 sheets

Special size: single sheet only (manual feed)

NOTES:
- When you need to send or copy more pages than the feeder limit, place additional pages in feeder when last page in feeder is being scanned.
- Place additional pages carefully and gently in feeder. If force is used, double-feeding or a document jam may result.

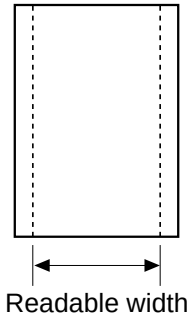
6. Readable Width & Length

The readable width and length of a document are slightly smaller than the actual document size.

Note that characters or graphics outside the effective document scanning range will not be read.

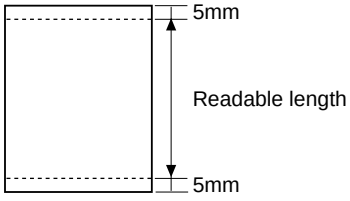
- **Readable width**

210mm, max.



- **Readable length**

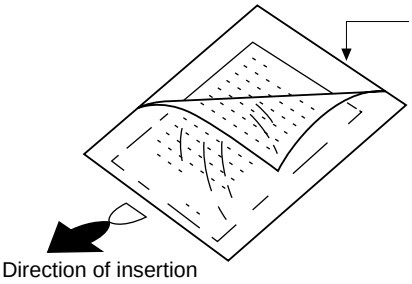
This is the length of the document sent minus 5mm from the top and bottom edges.



7. Use of Document Carrier Sheet

A document carrier sheet must be used for the following documents.

- Those with tears.
- Those smaller than size 148mm (W) x 128mm (L).
- Carbon-backed documents


Make print straight across paper
E.G.
Place the document carrier in the document feeder with the clear film side down
Direction of insertion

NOTE: To transmit a carbon-backed document, insert a white sheet of paper between the carbon back of the document and the document carrier.

- Those containing an easily separable writing substance (e.g., tracing paper written on with a soft, heavy lead pencil).

NOTES:
- When using the document carrier, carefully read the instructions written on the back.
- If the document carrier is dirty, clean it with a soft, moist cloth, and then dry it before using for transmission.
- Do not place more than one document in the carrier at a time.

[4] Installation

1. Site selection

Take the following points into consideration when selecting a site for this model.

ENVIRONMENT

- The machine must be installed on a level surface.
- Keep the machine away from air conditioners, heaters, direct sunlight, and dust.
- Provide easy access to the front, back, and sides of the machine. In particular, keep the area in front of the machine clear, or the original document may jam as it comes out after scanning.
- The temperature should be between 5° and 35°C.
- The humidity should be between 30% and 85% (without condensation).

ELECTRICITY

AC 220-230V, 50Hz, earthed (2-prong) AC outlet is required.

Caution!

- Connection to a power source other than that specified will cause damage to the equipment and is not covered under the warranty.
- If your area experiences a high incidence of lightning or power surges, we recommend that you install a surge protector for the power and telephone lines. Surge protectors can be purchased at most telephone specialty stores.

If the machine is moved from a cold to a warm place...

If the machine is moved from a cold to a warm place, it is possible that the reading glass may fog up, preventing proper scanning of documents for transmission. To remove the fog, turn on the power and wait approximately 2 hours before using the machine.

TELEPHONE JACK

A standard telephone jack must be located near the machine.
This is the telephone jack commonly used in most homes and offices.

- Plugging the fax machine into a jack which is not an jack may result in damage to the machine or your telephone system. If you do not know what kind of jack you have, or needed to have one installed, contact the telephone company.

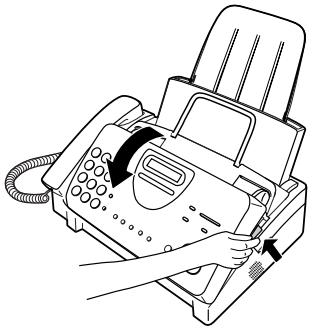
2. Loading the imaging film
UX-3CR(UX-370)
FO-3CR(FO-780)

Your fax uses a roll of imaging film to create printed text and images. The print head in the fax applies heat to the imaging film to transfer ink to the paper. Follow the steps below to load or replace the film.

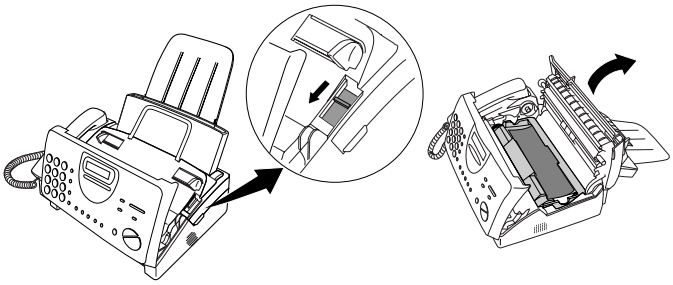
- The initial starter roll of imaging film included with your fax can print about 30 A4 pages.
- When replacing the film, use a roll of Sharp UX-3CR/FO-3CR imaging film. One roll can print about 95 A4 pages.

Note: If there is paper in the paper tray, pull the paper release plate forward and remove the paper before loading the imaging film.

① Open the operation panel by grasping the finger hold and pulling up.

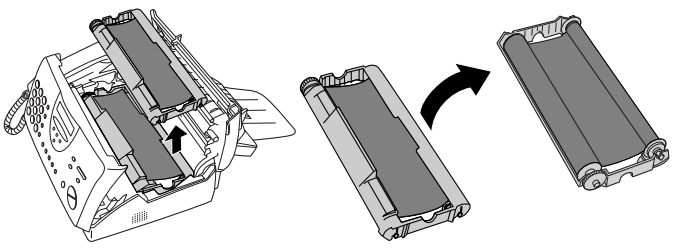


② Pull the green release on the right side of the machine forward, and open the print compartment cover.

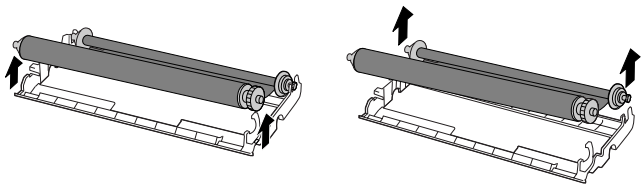


If you are installing the imaging film for the first time, go to Step 6.

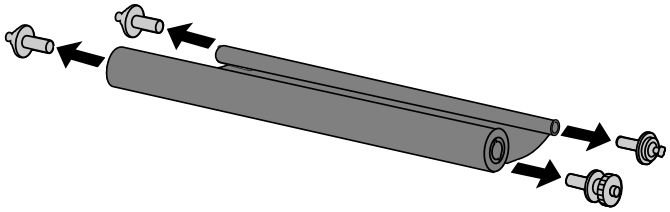
③ Remove the imaging film cartridge from the print compartment (grasp the handle at the front of the cartridge) and turn it over.



④ Remove the used film from the cartridge.

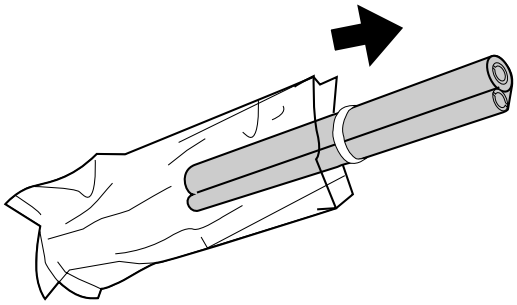


⑤ Remove the four green gears from the used film.
DO NOT DISCARD THE FOUR GREEN GEARS!



⑥ Remove the new roll of imaging film from its packaging.

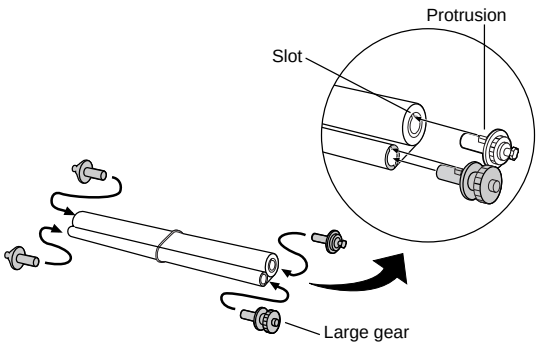
- Do not yet remove the band that holds the rolls together.



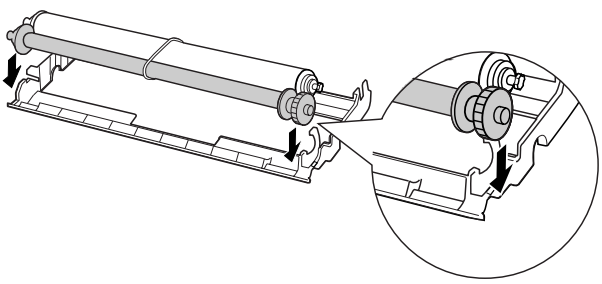
⑦ Insert the large gear into the green end of the empty spool. Make sure the two protrusions on the large gear fit firmly into the slots in the end of the spool.

Insert the remaining three gears into the spools, making sure the protrusion on each gear fits firmly into one of the slots in the end of each spool.

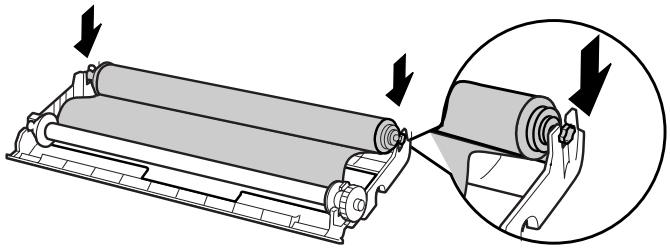
- If needed, pull the spools apart slightly to allow the gears to fit (the band will stretch).



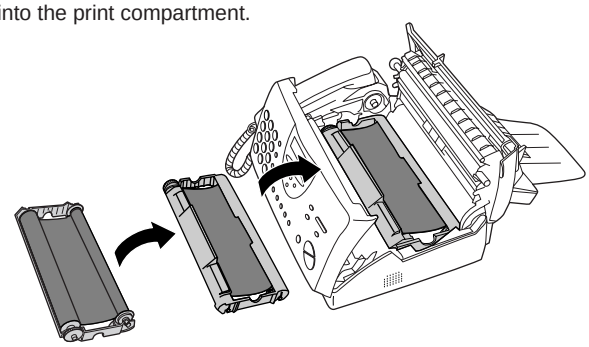
⑧ Insert the large gear into the large holder on the imaging film cartridge (make sure it clicks into place), and then insert the small gear on the other end of the spool into its holder.



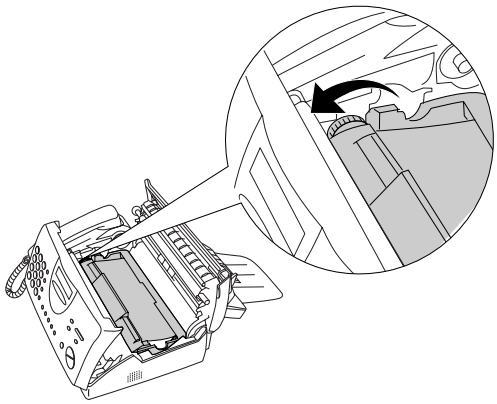
⑨ Cut the band that holds the two spools together. Unroll the film slightly and insert the small gears into their holders.



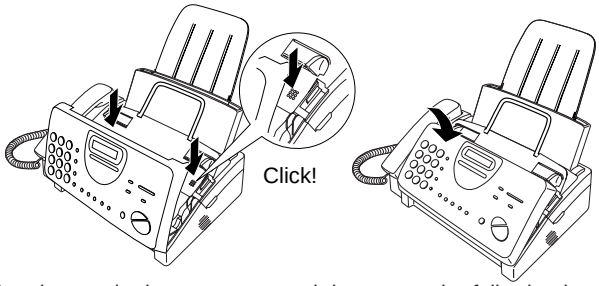
⑩ Turn the cartridge over, grasp the handle, and insert the cartridge into the print compartment.



⑪ Rotate the large gear toward you until the film is taut.



⑫ Close the print compartment cover (press down on both sides to make sure it clicks into place), and then close the operation panel.



⑬ Load paper in the paper tray and then press the following keys to initialize the film.

Note: Paper must be loaded before the film can be initialized. To load paper, see the following section, Loading the Printing Paper.

When to replace the imaging film.

Replace the imaging film when the display shows:

FILM END

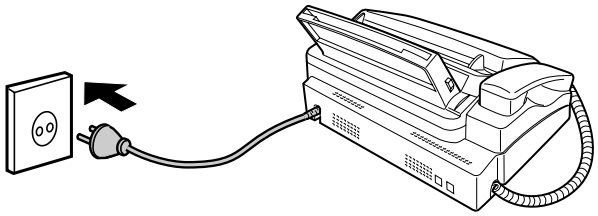
Use the following imaging film, which is available from your dealer or retailer: Sharp UX-3CR/FO-3CR Imaging Film

3. Assembly and connections

① Plug the power lead into a 220-230 V, 50 Hz, earthed (2-prong) AC outlet.

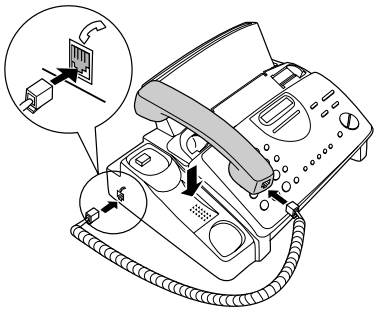
- **Caution**: The mains outlet (socket outlet) should be installed near the equipment and be easily accessable.
- The machine does not have a power on/off switch, so the power is turned on and off by simply plugging in or unplugging the power lead.

Note: If your area experiences a high incidence of lightning or power surges, we recommend that you install surge protectors for the power and telephone lines. Surge protectors can be purchased from your dealer or at most telephone specialty stores.



② Connect the handset as shown and place it on the handset rest.

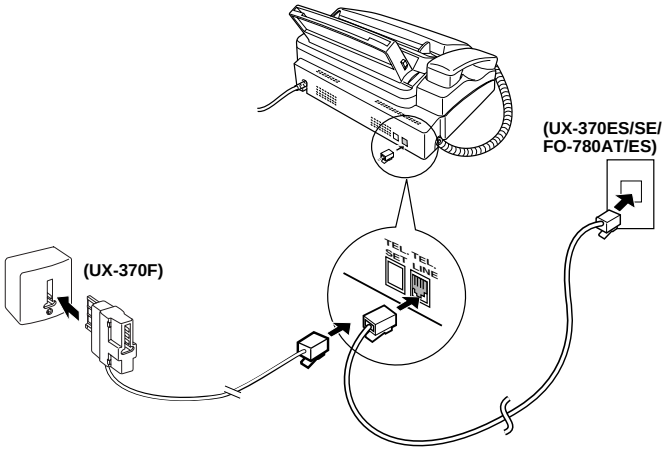
♦ The ends of the handset cord are identical, so they will go into either socket.



Make sure the handset cord goes into the socket marked with a handset symbol on the side of the machine!

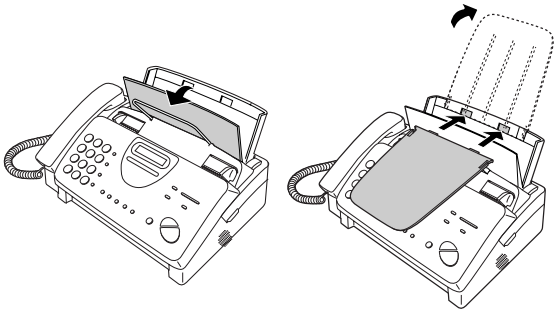
Use the handset to make ordinary phone calls, or to transmit and receive documents manually.

③ Insert one end of the line cord into the socket on the back of the machine marked **TEL.LINE**. Insert the other end into a wall telephone socket.



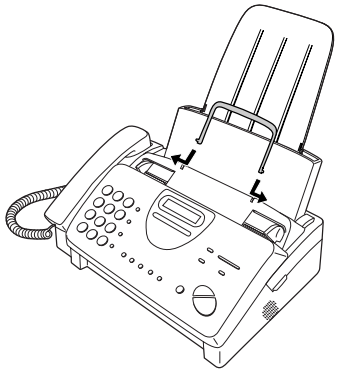
④ Attach the paper tray extension.

♦ Pull the paper release plate forward. Insert the paper tray extension horizontally into the notches in the paper tray. Rotate the paper tray extension up until it snaps into place.



⑤ Attach the original document support.

Note: The original document support has a top side and a bottom side. If you cannot insert the tabs on the support into the holes, turn the support over.



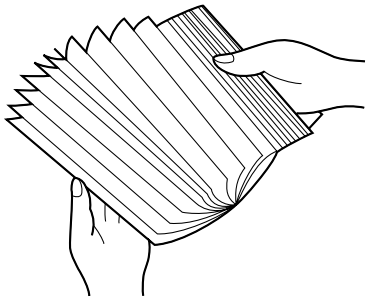
4. Loading printing paper

You can load letter or legal size paper in the paper tray. The maximum number of sheets is:

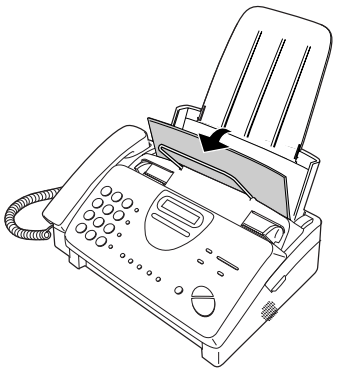
♦ **60** for paper from 60 to 80 g/m^2

♦ **50** for paper from 75 to 90 g/m^2

① Fan the paper, and then tap the edge against a flat surface to even the stack.

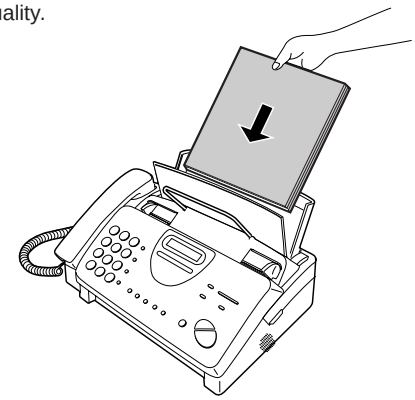


② Pull the paper release plate toward you.



③ Insert the stack of paper into the tray, **print side down**.

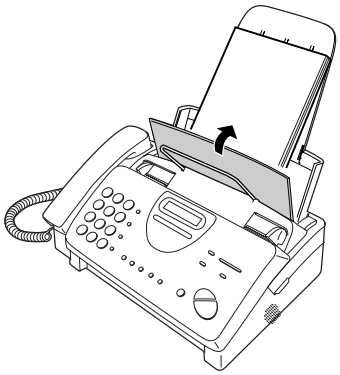
- If paper remains in the tray, take it out and combine it into a single stack with the new paper before adding the new paper.
- Be sure to load the paper so that printing takes place on the **print** side of the paper. Printing on the reverse side may result in poor print quality.



④ Push the paper release plate back down.

- If the paper release plate is not pushed down, paper feed errors will result.

Note: When receiving faxes or copying documents, do not allow a large number of pages to accumulate in the output tray. This may obstruct the outlet and cause paper jams.



⑤ Your fax has been set at the factory to print at normal contrast.

Depending on the type of paper you have loaded, you may find that you obtain better print quality by changing the setting to LIGHT.

Press these keys:

FUNCTIOM 6 ✳ ✳

The display will show: PRINT CONTRAST

Press **1** to select NORMAL or **2** to select LIGHT.

NORMAL **1** or LIGHT **2**

The display will show: COPY CUT-OFF

Press the **STOP** key to return to the date and time display.

STOP

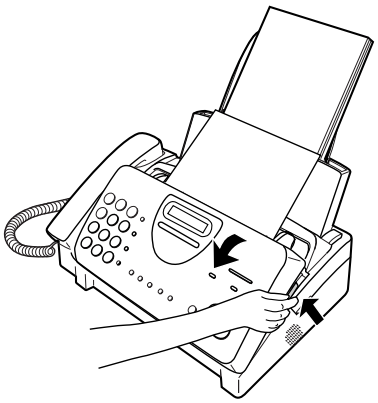
5. Clearing a jammed document

If the original document doesn't feed properly during transmission or copying, or DOCUMENT JAMMED appears in the display, first try pressing the **START/MEMORY** key. If it doesn't feed out, remove it as follows:.

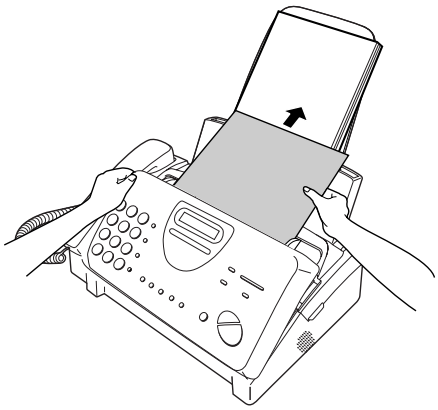
Important:

Do not try to remove a document without opening the operation panel. This may damage the feeder mechanism.

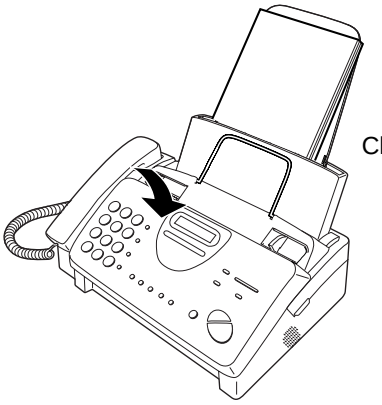
① Open the operation panel by grasping the finger hold and pulling up.



② Remove the document.



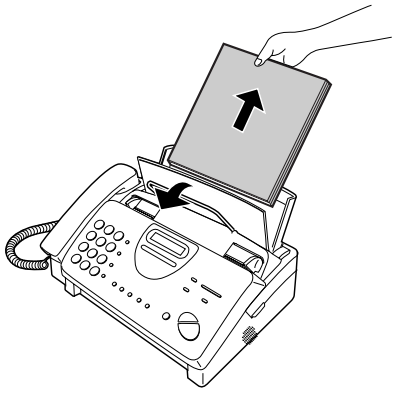
③ Close the operation panel, making sure it clicks into place.



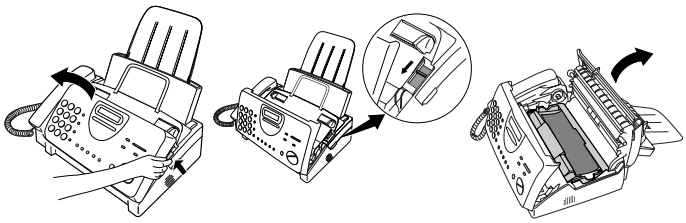
Clik!

6. Clearing jammed printing paper

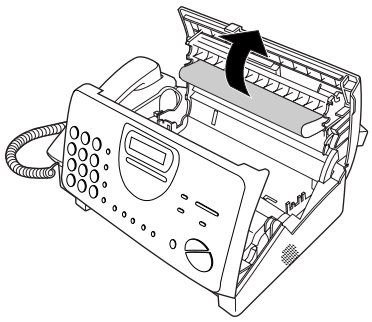
① Pull the paper release plate forward and remove the paper.



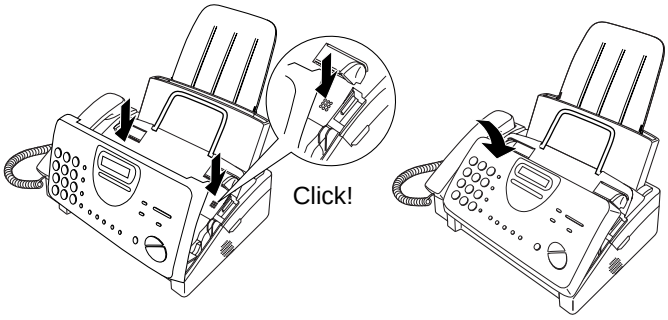
② Open the operation panel (grasp the finger hold and pull up), and then pull the release on the right side of the machine forward to open the print compartment cover.



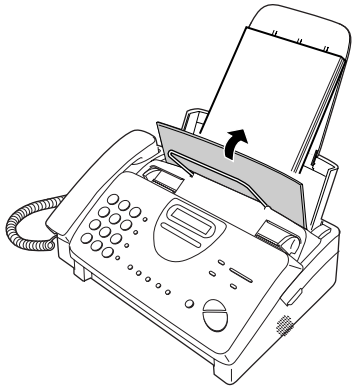
③ Gently pull the jammed paper out of the machine, making sure no torn pieces of paper remain in the print compartment or rollers.



④ Close the print compartment cover (press down on both sides to make sure it clicks into place), and then close the operation panel.

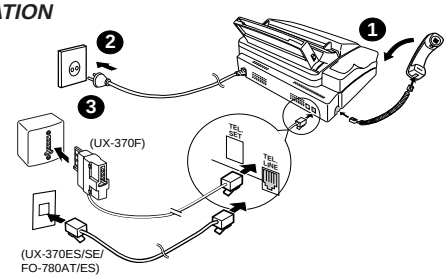


⑤ Replace the paper in the paper tray and push the paper release plate back down.



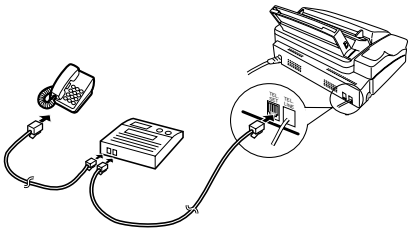
[5] Quick reference guide

INSTALLATION



1. Connect the handset as shown.
2. Plug the power cord into a earthed, 220-230 V outlet.
3. Plug one end of the telephone line into the **TEL. LINE** socket on the rear of the fax, and the other end into your telephone wall socket.

CONNECTING AN ANSWERING MACHINE AND/OR EXTENSION TELEPHONE



1. Remove the seal covering the **TEL. SET** socket on the rear of the fax. Connect an extension telephone or answering machine to the **TEL. SET** socket, using the socket adapter if required.
2. If desired, connect an extension phone to the answering machine.

ENTERING YOUR NAME AND NUMBER

Note: Imaging film and paper must be loaded to perform the following operation.

1. Press: FUNCTION, 3, #, #

   Display shows: OWN NUMBER SET

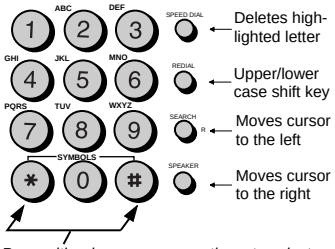
2. Press: START/MEMORY
3. Enter your fax number (max. of 20 digits) by pressing the number keys.

♦ If you make a mistake, press the **SEARCH/R** key to move the cursor back to the mistake, then enter the correct number or letter.

4. Press: START/MEMORY
5. Enter your name by pressing the appropriate number keys as shown below.

♦ To enter two letters in succession that require the same key, press the **SPEAKER** key after entering the first letter.

A = 2 2	J = 5 5	S = 7 7 7 7
B = 2 2 2	K = 5 5 5	T = 8 8
C = 2 2 2 2	L = 5 5 5 5	U = 8 8 8
D = 3 3	M = 6 6	V = 8 8 8 8
E = 3 3 3	N = 6 6 6	W = 9 9
F = 3 3 3 3	O = 6 6 6 6	X = 9 9 9
G = 4 4	P = 7 7	Y = 9 9 9 9
H = 4 4 4	Q = 7 7 7	Z = 9 9 9 9 9
I = 4 4 4 4	R = 7 7 7 7	SPACE = 1 1



6. When finished, press: START/MEMORY, STOP

SETTING THE DATE AND TIME

Note: Imaging film and paper must be loaded to perform the following operation.

Press: FUNCTION, 3, ✳, ✳, ✳

Display shows: DATE & TIME SET

Press the **START/MEMORY** key: START/MEMORY

Enter two digits for the Day (01 through 31).

Enter two digits for the Month (01 through 12).

Enter four digits for the Year (Ex: 1999).

Enter two digits for the Hour (01 through 23).

Enter two digits for the Minute (00 through 59).

When finished, press: START/MEMORY, STOP

STORING AND CLEARING NUMBERS FOR AUTOMATIC DIALING

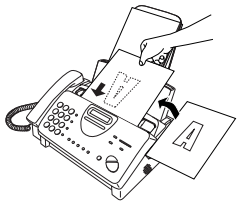
Note: Imaging film and paper must be loaded to perform the following operation.

1. Press: FUNCTION, 3, #

   Display shows: FAX/TEL # MODE

2. Press **1** to store a number or **2** to clear a number.
3. Enter a 2-digit Speed Dial number (from 01 to 05 for Rapid Key Dialing, or 06 to 45 for Speed Dialing) (FO-780 from 01 to 08 for Rapid Key Dialing, or 09 to 88 for Speed Dialing). (If you are clearing a number, go to Step 7.)
4. Enter the full telephone/fax number.
5. Press: START/MEMORY
6. Enter the name of the location by pressing number keys (max. of 20 characters). (Refer to the letter entry table in ENTERING YOUR NAME AND NUMBER.)
7. Press: START/MEMORY, STOP

SENDING DOCUMENTS



Place your document (up to 10 pages) face down in the document feeder.

Normal Dialing

1. Lift the handset or press SPEAKER
2. Dial the fax number.
3. Wait for the reception tone (if a person answers, ask them to press their Start key).
4. Press: START/MEMORY

Rapid Key Dialing

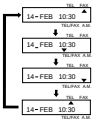
Press the appropriate Rapid Key. Transmission will begin automatically.

Speed Dialing

1. Press: SPEED DIAL
2. Enter 2-digit Speed Dial number.
3. Press: START/MEMORY

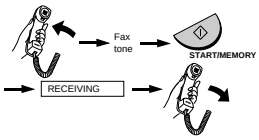
RECEIVING DOCUMENTS

Press: RECEPTION MODE



FAX mode: The fax automatically answers and receives the incoming document.

TEL mode:

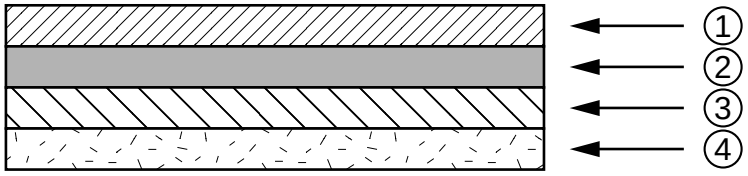


TEL/FAX mode:
The fax machine automatically answers on 1 or 2 rings and receives faxes. Voice calls (including manually dialled fax transmissions) are signalled by a special ringing sound.

[6] Option imaging film specifications (UX-3CR/FO-3CR)

1. Structure

This article is composed of polyester film coated with heat-resistant layer, matt layer and hot melt ink layer, leader film and paper core. Ink film specification is "DNP standard ink film HC".



① Heat Resistant Layer
② Base Film
③ Matt Layer
④ Hot melt Ink Layer

2. Details of compositions

2-1. Base film

Heading	Requirements	Measuring method
Material	Polyethylene-terephthalate	–

2-2. Heat resistant layer

Heading	Requirements	Measuring method
Grade	HR Mixer P-5	–

2-3. Matt layer

Heading	Requirements	Measuring method
Grade	ML Sumi	–

2-4. Hot melt ink layer

Heading	Requirements	Measuring method
Grade	#507W	–

CHAPTER 2. ADJUSTMENTS

[1] Adjustments

General

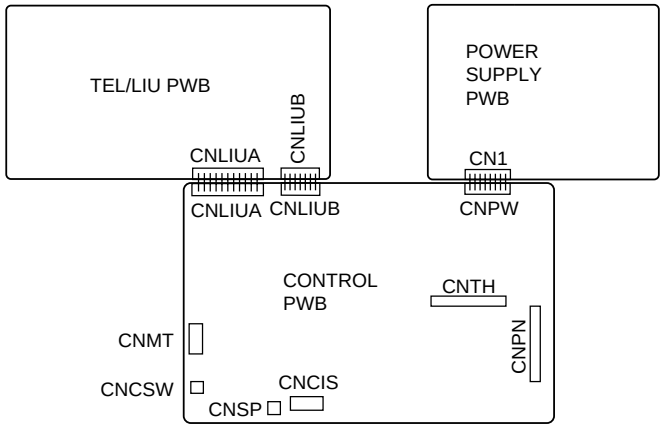
Since the following adjustments and settings are provided for this model, make adjustments and/or setup as necessary.

1. Adjustments

Adjustments of output voltage (FACTORY ONLY)

1. Install the power supply unit in the machine.
2. Set the recording paper and document.
3. When the document is loaded, power is supplied to the output lines. Confirm that outputs are within the limits below.

Output voltage settings



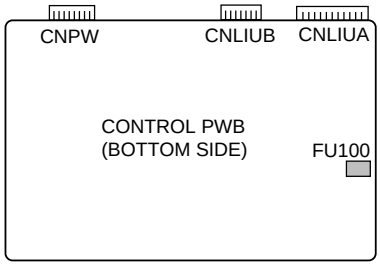
Output	Voltage limits
+5V	4.75V ~ 5.25V
+24V	23.3V ~ 24.7V

Connector No. / Pin No.	CNPW
1	MG
2	MG
3	+24V
4	+24V
5	+24V
6	DG
7	+5V
8	DG
9	PSAVE

2. IC protectors replacement

ICPs (IC Protectors) are installed to protect the motor driver circuit. ICPs protect various ICs and electronic circuits from an overcurrent condition.

The location of ICPs are shown below:



(1) FU100 (ICP-S07) is installed in order to protect IC's from an overcurrent generated in the motor drive circuit. If FU100 is open, replace it with a new one.

3. Settings

(1) Dial mode selector

(UX-370ES/FO-780AT/ES)

DIAL mode (Soft Switch No. SWB4 DATA No. 3)

(step 1) Select "OPTION SETTING".

KEY : [FUNCTION] (4)

DISPLAY: [OPTION SETTING] ⟺ [PRESS ✕ OR #]

(step 2) Select "DIAL MODE".

KEY: Push (#) until " [DIAL MODE] " is indicated because the number of (#)s changes by the model.

Cursor
When initially registering, the mode shows 1=TONE. When registering again, the mode which was registered formerly is shown.

DISPLAY: [DIAL MODE] ⟺ [1=TONE, 2=PULSE]

(step 3) Select, using "1" or "2".

KEY: (1)

DISPLAY: [TONE SELECTED]

KEY: (2)

DISPLAY: [PLUSE SELECTED]

(step 4) End, using the "STOP" key.

KEY: STOP

(UX-370SE/F)

Setting is not required since the required mode is TONE ONLY.

[2] Diagnostics and service soft switch

1. Operating procedure

(1) Entering the diagnostic mode

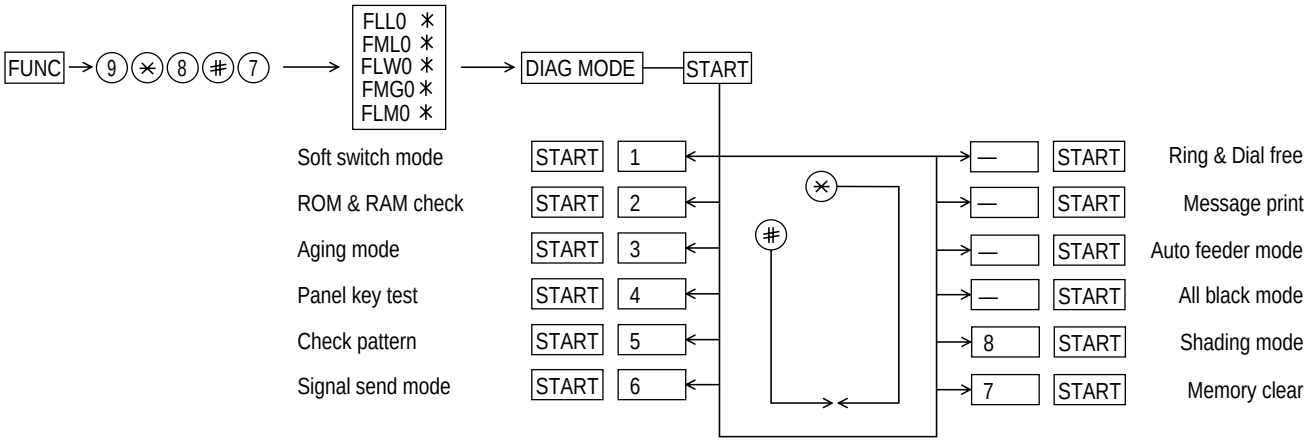
Press FUNC →9→ ✳ →8 →# →7 , and the following display will appear.

ROM Ver. FLL0 ✳ (FML0 ✳, FLW0 ✳, FMG0 ✳, FLM0 ✳) After 2 sec: DIAG MODE

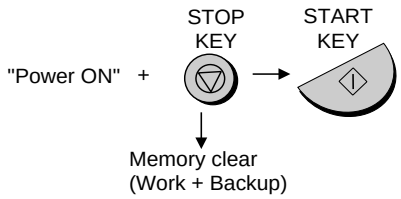
FLL0 ✳ (UX-370ES)
FML0 ✳ (UX-370SE)
FLW0 ✳ (UX-370F)
FMG0 ✳ (FO-780AT)
FLM0 ✳ (FO-780ES)

Then press the START key. Select the desired item with the ✳ key or the # key or select with the rapid key. Enter the mode with the START key.

(Diag•specifications)



If the diag mode cannot be set, repeat the diag mode operation, performing the following operation.
After the power is turned on and "WAIT A MOMENT" is indicated, press the STOP key.



In relation with the process response (request from Production Engineering) "WAIT A MOMENT" clock indication may appear depending on STOP key timing. If the STOP key is held down, "MEMORY CLEAR?" appears.

2. Diagnostic items

ITEM No.	DIRECT key (UX-370)	DIRECT key (FO-780)	Contents	Function
1	1	1	SOFT SWITCH MODE	Soft switches are displayed and changed. List can be output.
2	2	2	ROM & RAM CHECK	ROM is sum-checked, and RAM is matched. Result list is output.
3	3	3	AGING MODE	10 sheets of check patterns are output every 5 minutes per sheet.
4	4	4	PANEL KEY TEST	Panel keys are tested. Result list is output.
5	5	5	CHECK PATTERN	Check pattern is output.
6	—	6	SIGNAL SEND MODE	Various signals of FAX communication are output.
7	—	7	MEMORY CLEAR	Back-up memory is cleared, and is set at delivery.
8	—	8	SHADING MODE	Shading compensation is performed in this mode.
9	—	—	ALL BLACK PRINT	To check the print head, whole dots are printed over the interval of 2 m.
10	—	—	AUTO FEEDER MODE	Insertion and discharge of document are tested.
11	—	—	MESSAGE PRINT	The display message of each language is printed out together with the English equivalent.
12	—	—	RING & DIAL FREE	Allows CI detection of 13Hz or more. Eliminates dial tone detection in auto dial.

3. Diagnostic items description

3. 1. Soft switch mode

Used to change the soft switch settings.

The soft switch which is stored internally is set by using the keys.

The available soft switches are SW-A1 to SW-M2.

The content of soft switches is shown in page 2-5 to 2-16.

The contents are set to factory default settings.

3. 2. ROM & RAM check

ROM executes the sum check, and RAM executes the matching test. The result will be notified with the number of short sounds of the buzzer as well as by printing the ROM & RAM check list.

Number of short sounds of buzzer 0 → No error
1 → ROM error
2 → RAM error (32Kbyte)

3. 3. Aging mode

If any document is first present, copying will be executed sheet by sheet. If no document is present, the check pattern will be printed sheet by sheet. This operation will be executed at a rate of one sheet per 5minutes, and will be ended at a total of 10 sheets.

3. 4. Panel key test

This mode is used to check whether each key operates properly or not. Press the key on the operation panel, and the key will be displayed on the display. Therefore, press all keys. At this time,finally press the STOP key.

When the STOP key is pressed, the keys which are not judged as "pressed" will be printed on the result list.

- LED port of the contact image sensor (CIS) is kept on during the term from when start of the panel test mode to end with the STOP key.

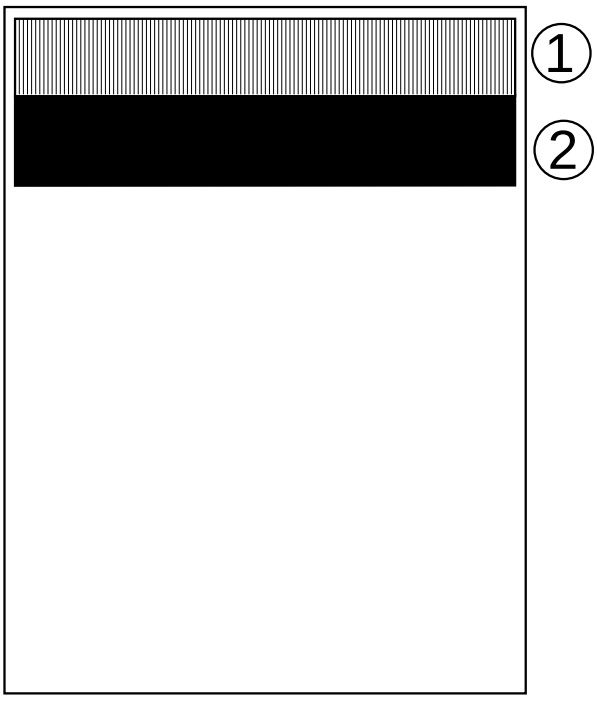
3. 5. Check pattern

This mode is used to check the state of the printing head. It is ended with the following pattern printed on one printing sheet.

① Longitudinal stripe 2 Approx. 30 mm

2 black dots and 2 white dots are repeatedly progressed on one line.

② Full black Approx. 30 mm



3. 6. Signal send mode

This mode is used to send various signals to the circuit during FAX communication. Every push of START key sends a signal in the following sequence. Moreover, the signal sound is also output to the speaker when the line monitor of the soft switch is on.

[1] No signal (CML signal turned on)
[2] 9600bps
[3] 7200bps
[4] 4800bps
[5] 2400bps
[6] 300bps (FLAG)
[7] 2100Hz (CED)
[8] 1100Hz (CNG)
[9] END

3. 7. Memory clear

This mode is used to clear the backup memory and reset to the default settings.

3. 8. Shading mode

The mode is used for the shooting compensation. For reading, set up the special original paper.

The shooting compensation memorizes the reference data of white and black for reading.

Moreover, the memorized data is not erased even if memory clear mode is executed.

3. 9. All black print

This mode is used to check the state of the printing head and intentionally overheat it. Whole dots are printed over the interval of 2 m. If it is overheated or the printing sheet is jammed, press STOP key for the end.

3. 10. Auto feeder mode

In this mode, a document is inserted and discharged to check the auto feed function.

After this mode is started, set a document, and the document feed will be automatically tested.

3. 11. Message print

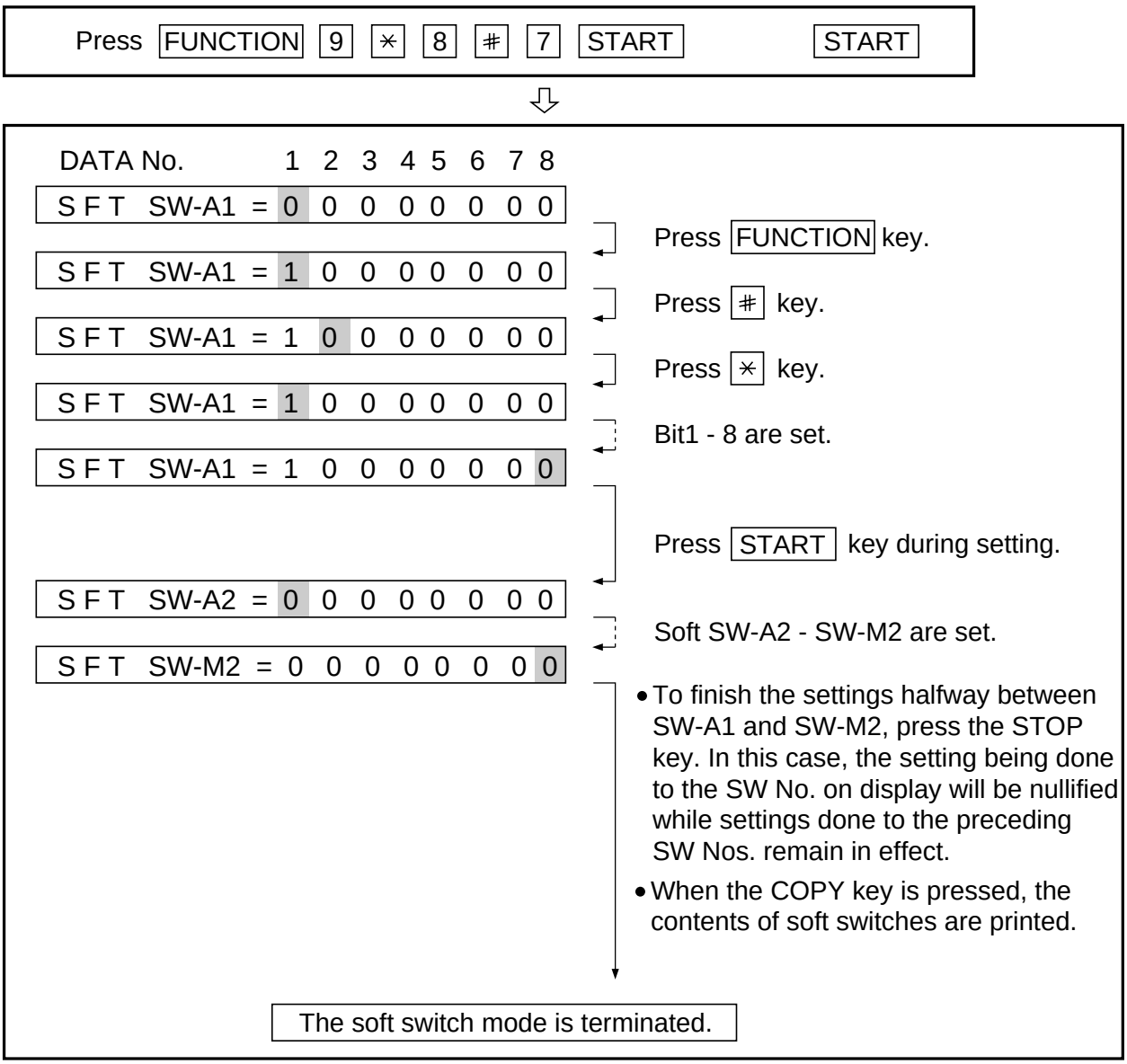
Used to print the displayed message of communication for translate each language.

3. 12. Ring & Dial free

Used to reject dial tone check while autodialing is carried out. And used to change the bottom Ring frequency of auto-receiving to 13Hz.

4. How to make soft switch setting

To enter the soft switch mode, make the following key entries in sequence.


Press FUNCTION 9 ✳ 8 # 7 START
START
DATA No. 1 2 3 4 5 6 7 8
S F T SW-A1 = 0 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A2 = 0 0 0 0 0 0 0 0
S F T SW-M2 = 0 0 0 0 0 0 0 0
Press FUNCTION key.
Press # key.
Press ✳ key.
Bit1 - 8 are set.
Press START key during setting.
Soft SW-A2 - SW-M2 are set.
• To finish the settings halfway between SW-A1 and SW-M2, press the STOP key. In this case, the setting being done to the SW No. on display will be nullified while settings done to the preceding SW Nos. remain in effect.
• When the COPY key is pressed, the contents of soft switches are printed.
The soft switch mode is terminated.

5. Soft switch description

- **Soft switch**

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting								Remarks
			1	0	ES	SE	F	AT					
SW I A1	1	Protect from echo	No	Yes	0	0	0	0					
	2	Forced 4800 BPS reception	Yes	No	0	0	0	0					
	3	Footer print	Yes	No	0	0	0	0					
	4	Length limitation of copy/send/receive	No limit	Copy/send: 60cm Receive: 1m	0	0	0	0					
	5	CSI transmission	No transmitted	Transmitted	0	0	0	0					
	6	DIS receive acknowledgement during G3 transmission	Twice	NSF: Once DIS: Twice	0	0	0	0					
	7	Non-modulated carrier for V29 transmission modem	Yes	No	0	0	0	0					
	8	EOL detect timer	25 s	13 s (ES/F:5s)	0	0	0	0					
SW I A2		Modem speed		V.29 / V.27 ter									
				9600 / 7200 / 4800 / 2400									
	1		No. 1	0 / 0 / 0 / 0	0	0	0	0					
	2		No. 2	0 / 0 / 0 / 0	0	0	0	0					
	3		No. 3	0 / 1 / 1 / 0	0	0	0	0					
	4		No. 4	1 / 1 / 0 / 0	1	1	1	1					
	5	Sender's information transmit	No	Yes	0	0	0	0					
	6	H2 mode	No	Yes	0	0	0	0					
	7	Communication error treatment in RTN sending mode (reception)	No communication error	Communication error	0	0	0	0					
	8	CNG transmission	No	Yes	0	0	0	0					
SW I A3		CED tone signal interval		1000ms / 750ms / 500ms / 75ms									
	1		No. 1	1 / 1 / 0 / 0	0	0	0	0					
	2		No. 2	1 / 0 / 1 / 0	0	0	0	0					
	3	MR coding	No	Yes	0	0	0	0					
	4	Reserved			0	0	0	0					
	5	Reserved			0	0	0	0					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					
SW I A4	1	Signal transmission level	Binary input		0	0	0	0					
	2		No. = 16 8 4 2 1		1	1	1	1					
	3		1 2 3 4 5		0	1	0	1					
	4		0 1 0 1 1 (ES/F)		1	0	1	0					
	5		0 1 1 0 0 (SE/AT)		1	0	1	0					
	6	Protocol monitor (error print)	Printed at com. error	Not printed	0	0	0	0					
	7	Protocol monitor	Yes	No	0	0	0	0					
	8	Line monitor	Yes	No	0	0	0	0					
SW I A5		Digital line equalization setting		7.2km / 0km									
	1	(Reception)	No. 1	1 / 0	1	1	1	1					
	2		No. 2	1 / 0	1	1	1	1					
	3	Reserved			0	0	0	0					
	4	Reserved			0	0	0	0					
		Digital cable equalizer setting		7.2km / 0km									
	5	(Reception for Caller ID)	No. 5	1 / 0	0	0	0	0					
	6	(SE/F only)	No. 6	1 / 0	0	0	0	0					
	7	Error criterion	10 ~ 20 %	5 ~ 10 %	0	0	0	0					
	8	Anti junk fax check	Yes	No	0	0	0	0					OPTION

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting								Remarks
			1	0	ES	SE	F	AT					
SW I A6	1	Auto gain control (MODEM)	Enable	Disable	1	1	1	1					
	2	End Buzzer	Yes	No	1	1	1	1					
	3	Disconnect the line when DIS is received in RX mode	No	Yes	1	1	1	1					
	4	Equalizer freeze control (MODEM)	On	Off	0	0	0	0					
	5	Equalizer freeze control 7200 BPS only	No	Yes	0	0	0	0					
	6	CNG transmission in manual TX mode	Yes	No	1	1	1	1					
	7	Initial compression scheme for sharp fax in TX mode	MR mode	H2 mode	0	0	0	0					
	8	Reserved			0	0	0	0					
SW I B1	1	Reserved			0	0	0	0					
	2	Reserved			0	0	0	0					
	3	Reserved			0	0	0	0					
	4	Reserved			0	0	0	0					
	5	Recall times	Binary input		0	0	0	0					
	6		No. = 8 4 2 1		0	0	0	0					
	7		5 6 7 8		1	1	1	1					
	8		0 0 1 0		0	0	0	0					
SW I B2	1	Dial pausing (sec/pause)	4 sec	2 sec	1	1	1	1					
	2	Dial tone detection (before auto dial)	No	Yes	0	0	0	0					
	3	Reserved			0	0	0	0					
	4	Busy tone detection (after auto dial)	No	Yes	0	0	0	0					
	5	Waiting time after dialing	90 sec	45 sec (F:140 sec)	0	0	0	0					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	PBX connection	Yes	No	0	0	0	0					OPTION
SW I B3		PBX recall function (R key select)		No. / Earth / Flash									OPTION
	1		No. 1	0 / 1 / 1	1	1	1	1					(Except
	2		No. 2	0 / 0 / 1	1	1	1	1					for F)
	3	Reserved			0	0	0	0					
		PBX select		ID / Earth / Flash									OPTION
	4		No. 4	0 / 1 / 1	0	0	0	0					(Except
	5		No. 5	0 / 0 / 1	0	0	0	0					for F)
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					
SW I B4	1	Reserved			0	0	0	0					
	2	Reserved			0	0	0	0					
	3	Dial mode	Tone	Pulse	0	1	1	1					OPTION (ES/AT only)
	4	Pulse → Tone change function by ✳ key	Enable	Disable	1	1	1	1					
	5	Reserved			0	0	0	0					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting								Remarks
			1	0	ES	SE	F	AT					
SW I B5		DTMF signal transmission level	Binary input										
	1	(Low)	No. = 16 8 4 2 1		0	1	0	0					
	2		1 2 3 4 5		1	0	1	1					
	3		0 1 1 0 1	(ES)	1	0	1	1					
	4		1 0 0 1 1	(SE)	0	1	1	1					
	5		0 1 1 1 0	(F/AT)	1	1	0	0					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					
SW I B6	1	DTMF signal transmission level	Binary input		0	1	0	0					
	2	(High)	No. = 16 8 4 2 1		1	0	1	1					
	3		1 2 3 4 5		0	0	0	0					
	4		0 1 0 1 1	(ES/F/AT)	1	0	1	1					
	5		1 0 0 0 1	(SE)	1	1	1	1					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					
SW I C1		Reading slice (Binary)		Factory setting / Light / Dark / Darker in dark mode									
	1		No. 1	0 / 1 / 0 / 1	0	0	0	0					
	2		No. 2	0 / 0 / 1 / 1	0	0	0	0					
		Reading slice (Half tone)		Factory setting / Light / Dark / Darker in dark mode									
	3		No. 3	0 / 1 / 0 / 1	0	0	0	0					
	4		No. 4	0 / 0 / 1 / 1	0	0	0	0					
	5	Line density selection	Fine	Standard	0	0	0	0					OPTION
	6	Halftone gray scale selection	16 level	64 level	0	0	0	0					OPTION
	7	MTF correction in half tone mode	No	Yes	0	0	0	0					
	8	Reserved			0	0	0	0					
SW I D1		Number of rings for auto receive	Binary input										OPTION
	1		No. = 8 4 2 1		0	0	0	0					(Except
	2		1 2 3 4		0	0	0	0					for F)
	3		0 0 1 0	(ES/F)	1	0	1	0					
	4		0 0 0 1	(SE/AT)	0	1	0	1					
	5	Automatic switching manual to auto receive mode	Reception after 5 rings	No reception	0	0	0	0					
	6	Reserved			0	0	0	0					
	7	CI detection	13 Hz or more	As is PTT	0	0	0	0					
	8	Reserved			0	0	0	0					
SW I D2	1	Reserved			0	0	0	0					
	2	Reserved			0	0	0	0					
	3	Reserved			0	0	0	0					
	4	Reserved			0	0	0	0					
	5	Caller ID function (SE/F only)	Yes	No	0	0	0	0					OPTION (SE/F only)
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Caller ID detect during CI off (SE/F only)	All times	Only first	0	0	1	0					
SW I E1	1	Tel/Fax Automatic switching mode	Tel/Fax auto switch	Switch to Fax	1	1	1	1					
		Pseudo ringing time at phone/fax		15sec / 60sec / 30sec / 120sec									OPTION
	2	automatic switching mode	No. 2	0 / 0 / 1 / 1	0	0	0	0					
	3		No. 3	0 / 1 / 0 / 1	0	0	0	0					
	4	Number of CNG signal detection at the tel/fax automatic switching mode	Twice	Once	1	1	1	1					
	5	Reserved			0	0	0	0					
	6	Reserved			0	0	0	0					
	7	Post answer tone (transmit in Tel/Fax mode)	No	Yes	0	0	0	0					
	8	Reserved			0	0	0	0					

SW NO.	DATA NO.	ITEM	Switch setting and function								Initial setting								Remarks
			1				0				ES	SE	F	AT					
SW I E2	1	Pseudo ringer sound volume	Binary input								0	0	0	0					
	2		No. = 8 4 2 1								1	1	1	1					
	3		1 2 3 4								0	0	0	0					
	4		0 1 0 1								1	1	1	1					
	5	Reserved									0	0	0	0					
	6	Reserved									0	0	0	0					
	7	Reserved									0	0	0	0					
	8	Reserved									0	0	0	0					
SW I F1		DTMF detection time		50ms		80ms		100ms		120ms									
	1		No. 1	0		0		1		1	0	0	0	0					
	2		No. 2	0		1		0		1	0	0	0	0					
	3	Protection of remote reception (5 ✳✳) detect	Yes				No				0	0	0	0					OPTION
	4	Remote reception with GE telephone	Compatible				Not compatible				1	1	1	1					
	5	Remote operation code figures by external TEL (0~9)	Binary input								0	0	0	0					OPTION
	6		No. = 8 4 2 1								1	1	1	1					
	7		5 6 7 8								0	0	0	0					
	8		0 1 0 1								1	1	1	1					
SW I F2	1	CNG detection in STAND-BY mode	Yes				No				1	1	1	1					OPTION
		Number of CNG detect (AM mode)		1pulse		2pulses		3pulses		4pulses									
	2		No. 2	0		0		1		1	0	0	0	0					
	3		No. 3	0		1		0		1	1	1	1	1					
		Number of CNG (STAND-BY mode)		1pulse		2pulses		3pulses		4pulses									
	4		No. 4	0		0		1		1	0	0	0	0					
	5		No. 5	0		1		0		1	1	1	1	1					
	6	Reserved									0	0	0	0					
	7	Reserved									0	0	0	0					
	8	Reserved									0	0	0	0					
SW I G1	1	Quiet detect time	Binary input								0	0	0	0					OPTION
	2		No. = 8 4 2 1								1	1	1	1					
	3		1 2 3 4								1	1	1	1					
	4		0 1 1 0								0	0	0	0					
	5	Quiet detect start timing	Binary input								0	0	0	0					OPTION
	6		No. = 8 4 2 1								0	0	0	0					
	7		5 6 7 8								0	0	0	0					
	8		0 0 0 0								0	0	0	0					
SW I G2	1	Off hook hold	Binary input								0	0	0	0					
	2		No. = 128 64 32 16 8 4 2 1								0	0	0	0					
	3		1 2 3 4 5 6 7 8								0	0	0	0					
	4		0 0 0 0 0 0 0 0								0	0	0	0					
	5										0	0	0	0					
	6										0	0	0	0					
	7										0	0	0	0					
	8										0	0	0	0					
SW I G3		OGM detect timer		Not Work		100ms		200ms		300ms									
	1		No. 1	0		0		1		1	0	0	0	0					
	2		No. 2	0		1		0		1	1	1	1	1					
	3	Reserved									0	0	0	0					
	4	Reserved									0	0	0	0					
		Section time of quiet detection		30s		40s		50s		60s									
	5		No. 5	0		0		1		1	0	0	0	0					
	6		No. 6	0		1		0		1	1	1	1	1					
	7	Reserved									0	0	0	0					
	8	Reserved									0	0	0	0					

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting								Remarks
			1				0		ES	SE	F	AT					
SW I H1	1	Reserved							0	0	0	0					
	2	Reserved							0	0	0	0					
	3	Reserved							0	0	0	0					
	4	Busy tone continuous sound detect time	5 sec				As is PTT		1	1	1	1					
	5	Reserved							0	0	0	0					
	6	Busy tone detect continuation sound detect (during ICM : for internal A.M.)	No				Yes		0	0	0	0					
	7	Reserved							0	0	0	0					
	8	Busy tone detect intermittent sound detect (during ICM : for internal A.M.)	No				Yes		0	0	0	0					
SW I H2		Busy tone detection pulse number		2pulses	4pulses	6pulses	10pulses										
	1		No. 1	0	0	1	1		1	0	0	0					
	2		No. 2	0	1	0	1		1	1	1	1					
	3	Fax switching when A.M. full	Yes				No		0	0	0	0					OPTION
	4	Reserved							0	0	0	0					
	5	Reserved							0	0	0	0					
	6	Reserved							0	0	0	0					
	7	Reserved							0	0	0	0					
	8	Reserved							0	0	0	0					
SW I I1	1	Reserved							0	0	0	0					
	2	Reserved							0	0	0	0					
	3	Reserved							0	0	0	0					
	4	Reserved							0	0	0	0					
	5	Reserved							0	0	0	0					
	6	Reserved							0	0	0	0					
	7	Reserved							0	0	0	0					
	8	Reserved							0	0	0	0					
SW I I2	1	Reserved							0	0	0	0					
	2	Reserved							0	0	0	0					
	3	Reserved							0	0	0	0					
	4	Reserved							0	0	0	0					
	5	Reserved							0	0	0	0					
	6	Reserved							0	0	0	0					
	7	Reserved							0	0	0	0					
	8	Reserved							0	0	0	0					
SW I I3	1	Reserved							0	0	0	0					
	2	Reserved							0	0	0	0					
	3	Reserved							0	0	0	0					
	4	Reserved							0	0	0	0					
	5	Reserved							0	0	0	0					
	6	Reserved							0	0	0	0					
	7	Reserved							0	0	0	0					
	8	Reserved							0	0	0	0					
SW I I4	1	Reserved							0	0	0	0					
	2	Reserved							0	0	0	0					
	3	Reserved							0	0	0	0					
	4	Reserved							0	0	0	0					
	5	Reserved							0	0	0	0					
	6	Reserved							0	0	0	0					
	7	Reserved							0	0	0	0					
	8	Reserved							0	0	0	0					

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting								Remarks
			1	0	ES	SE	F	AT					
SW I I5	1	Reserved			0	0	0	0					
	2	Reserved			0	0	0	0					
	3	Reserved			0	0	0	0					
	4	Reserved			0	0	0	0					
	5	Reserved			0	0	0	0					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					
SW I I6	1	Reserved			0	0	0	0					
	2	Reserved			0	0	0	0					
	3	Reserved			0	0	0	0					
	4	Reserved			0	0	0	0					
	5	Reserved			0	0	0	0					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					
SW I I7	1	Reserved			0	0	0	0					
	2	Reserved			0	0	0	0					
	3	Reserved			0	0	0	0					
	4	Reserved			0	0	0	0					
	5	Reserved			0	0	0	0					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					
SW I J1	1	Activity report print	Automatic printout	No printout when memory full	0	0	0	0					OPTION
	2	Total communication hours and pages print	No	Yes	0	0	0	0					
	3	Sender's phone number setting	Cannot change	Change allowed	0	0	0	0					
	4	Reserved			0	0	0	0					
	5	Reserved			0	0	0	0					
	6	Summer time setting	No	Yes	0	0	0	0					
		Ringer volume		Off / Low / Middle / High									OPTION
	7		No. 7	0 / 0 / 1 / 1	1	1	1	1					
	8		No. 8	0 / 1 / 0 / 1	0	0	0	0					
SW I J2		Speaker volume (3 stages)		Low / Low / Middle / High									OPTION
	1		No. 1	0 / 0 / 1 / 1	1	1	1	1					
	2		No. 2	0 / 1 / 0 / 1	0	0	0	0					
	3	Polling key	Yes	No	0	0	0	0					OPTION
	4	Reserved			0	0	0	0					
	5	Reserved			0	0	0	0					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					
SW I J3	1	Automatic cover sheet	Yes	No	0	0	0	0					OPTION
		Communication results printout		E/T/M / Send only / Always / No print / Err only									OPTION
	2	(Transaction report)	No. 2	0 / 0 / 0 / 0 / 1	1	1	1	1					
	3		No. 3	0 / 0 / 1 / 1 / 0	0	0	0	0					
	4		No. 4	0 / 1 / 0 / 1 / 0	0	0	0	0					
	5	Reserved			0	0	0	0					
	6	Reserved			0	0	0	0					
	7	Reserved			0	0	0	0					
	8	Reserved			0	0	0	0					

SW NO.	DATA NO.	ITEM	Switch setting and function				Initial setting								Remarks
			1		0		ES	SE	F	AT					
SW I K1	1	Entering DIAG mode by pressing SPEED key	Yes		No		0	0	0	0					
	2	Black list (F only)	Yes		No		0	0	1	0					
	3	Reserved					0	0	0	0					
	4	Reserved					0	0	0	0					
	5	Reserved					0	0	0	0					
	6	Reserved					0	0	0	0					
	7	Reserved					0	0	0	0					
	8	Reserved					0	0	0	0					
SW I L1	1	Reserved					0	0	0	0					
	2	Reserved					0	0	0	0					
	3	Reserved					0	0	0	0					
	4	Reserved					0	0	0	0					
	5	Cut off mode (COPY mode)	Yes		No		1	1	1	1					OPTION
	6	A4 paper enable	Enable		Disable		1	1	1	1					
	7	LEGAL & LETTER paper enable	Enable		Disable		0	0	0	0					
	8	2 IN 1 mode	Yes		No		0	0	0	0					OPTION
SW I L2		Paper set size		LETTER	LEGAL	A4									
	1		No.1	0	0	1	1	1	1	1					
	2		No.2	0	1	0	0	0	0	0					
	3	Automatic reduce of receive	Auto		100 %		1	1	1	1					OPTION
	4	Print contrast	Light		Normal		0	0	0	0					OPTION
	5	Reception reduction ratio in case of memory full	100 %		93 %		0	0	0	0					OPTION
	6	Reserved					0	0	0	0					
	7	Reserved					0	0	0	0					
	8	Reserved					0	0	0	0					
SW I M1	1	Reserved					0	0	0	0					
	2	Reserved					0	0	0	0					
	3	Reserved					0	0	0	0					
	4	Reserved					0	0	0	0					
	5	Reserved					0	0	0	0					
	6	Reserved					0	0	0	0					
	7	Reserved					0	0	0	0					
	8	Reserved					0	0	0	0					
SW I M2	1	Reserved					0	0	0	0					
	2	Reserved					0	0	0	0					
	3	Reserved					0	0	0	0					
	4	Reserved					0	0	0	0					
	5	Reserved					0	0	0	0					
	6	Reserved					0	0	0	0					
	7	Reserved					0	0	0	0					
	8	Reserved					0	0	0	0					

• Soft switch function description

SW-A1 No. 1 Protect from echo

Used to protect from echo in reception.

SW-A1 No. 2 Forced 4800BPS reception

When line conditions warrant that receptions take place at 4800 BPS repeatedly.

It may improve the success of receptions by setting at 4800BPS.

This improves the receiving document quality and reduces handshake time due to fallback during training.

SW-A1 No. 3 Footer print

When set to "1", the date of reception, the sender machine No., and the page No. are automatically recorded at the end of reception.

SW-A1 No. 4 Length limitation of copy/send/receive

Used to set the maximum page length.

To avoid possible paper jam, the page length is normally limited to 0.6 meter for copy or transmit, and 1 meters for receive.

It is possible to set it to "No limit" to transmit a long document, such as a computer print form, etc. (In this case, the receiver must also be set to no limit.)

SW-A1 No. 5 CSI transmission

(CSI TRANSMISSION) is a switch to set whether the machine sends or does not send the signal (CSI signal) informing its own telephone No. to the remote fax machine when information is received. When "nonsending" is set, the telephone No. is not output on the remote transmitting machine if the remote transmitting machine has the function to display or print the telephone No. of receiving machine, using this CSI signal.

SW-A1 No. 6 DIS receive acknowledgment during G3 transmission

Used to make a choice of whether reception of DIS (NSF) is acknowledged after receiving two DISs (NSFs) or receiving one DIS (two NSFs). It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A1 No. 7 Non-modulated carrier for V29 transmission modem

Though transmission of a non-modulated carrier is not required for transmission by the V29 modem according to the CCITT recommendation, it may be permitted to a send non-modulated carrier before the image signal to avoid and echo suppression problem. It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A1 No. 8 EOL (End Of Line) detect timer

Used to make a choice of whether to use the 25-second or 13-second (SE/AT)/5-second (ES/F) timer for detection of EOL.
This is effective to override communication failures with some facsimile models that have longer EOL detection.

SW-A2 No. 1 ~ No. 4 Modem speed

Used to set determine the initial modem speed. The default is 9600BPS. It may be necessary to program it to a slower speed when frequent line fallback is encountered, in order to save the time required for fallback procedure.

SW-A2 No. 5 Sender's information transmit

(SENDER'S INFORMATION TRANSMISSION) is a switch to set the function to print the content of HEADER PRINT described in the passcode list at the front end of receiver's original when original is sent to the remote machine.

If this switch is set to "NO", the HEADER PRINT is not output at the receiving machine.

SW-A2 No. 6 H2 mode

Used to determine reception of H2 mode (15 sec transmission mode). When set to OFF, H2 mode reception is inhibited even though the transmitting machine has H2 mode function.

SW-A2 No. 7 Communication error treatment in RTN sending mode (Reception)

Used to determine communication error treatment when RTN is sent by occurrence of a received image error in G3 reception. When it is set to "1", communication error is judged as no error.

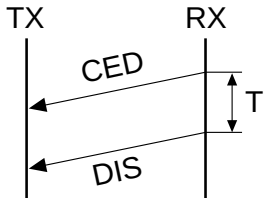
SW-A2 No. 8 CNG transmission

When set to "0" , this model allows CNG transmission by pressing the Start key in the key pad dialing mode. When set to "1", CNG transmission in the key pad dialing mode cannot be performed. In either case, CNG transmission can be performed in the auto dial mode.

SW-A3 No. 1, No. 2 CED tone signal interval

For international communication, the 2100Hz CED tone may act as an echo suppression switch, causing a communication problem.

Though SW-A3 No. 1 and No. 2 are normally set to 0, it should be changed this time between the CED tone signal to eliminate the communication problem caused by echo.



SW-A3 No. 3 MR Coding

Used to select the MR coding enable or disable.

SW-A3 No. 4 ~ No. 8 Reserved

Set to "0".

SW-A4 No. 1 ~ No. 5 Signal transmission level

Used to control the signal transmission level in the range of-0dB to-31dB.

The factory setting is at -11dB (MODEM output).

SW-A4 No. 6 Protocol monitor (Error print)

If set to "1", protocol is printed at communication error.

SW-A4 No. 7 Protocol monitor

Normally set to "0". If set to "1", communication can be checked, in case of trouble, without using a G3 tester or other tools.
When communication FSK data transmission or reception is made, the data is taken into the buffer. When communication is finished, the data is analyzed and printed out. When data is received with the line monitor (SW-A4 No. 8) set to "1" the reception level is also printed out.

SW-A4 No. 8 Line monitor

Normally set to "0". If set to "1", the transmission speed and the reception level are displayed on the LCD. Used for line tests.

SW-A5 No. 1, No. 2 Digital line equalization setting (Reception)

Line equalization when reception is to be set according to the line characteristics.

Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A5 No. 3, No. 4 Reserved

Set to "0".

SW-A5 No. 5, No. 6 Digital cable equalizer setting (Reception for Caller ID) (SE/F ONLY)

Line equalization when reception for CALLER ID is to be set according to the line characteristics.
Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A5 No. 7 Error criterion

Used to select error criterion for sending back RTN when receiving image data.

SW-A5 No. 8 Anti junk fax check

When using the Anti junk fax function, set to "1".

SW-A6 No. 1 Auto gain control (MODEM)

When this mode is enabled, if the reception signal level is under 31dBm. The modem itself controls the signal gain automatically.

SW-A6 No. 2 End buzzer

Setting this bit to 0 will disable the end buzzer (including the error buzzer/ on-hook buzzer).

SW-A6 No. 3 Disconnect the line when DIS is received in RX mode

Bit1= 0: When DIS signal is received during RX mode, disconnected the line is immediately.

Bit1= 1: When DIS signal is received during RX mode, wait the next signal.

SW-A6 No. 4 Equalizer freeze control (MODEM)

This switch is used to perform reception operation by fixing the equalizer control of modem for the line which is always in unfavorable state and picture cannot be received.

* Usually, the control is executed according to the state of line where the equalizer setting is changed always.

SW-A6 No. 5 Equalizer freeze control 7200BPS only

Setting which specifies SW-A3 No. 6 control only in the condition of 7200BPS modem speed.

SW-A6 No. 6 CNG transmission in manual TX mode

When set to "1", fax transmit the CNG signal in case of manual transmission mode (User press the START key after waiting the fax answering signal from handset or speaker).

SW-A6 No. 7 Initial compression scheme for sharp fax in TX mode

When set to "0", if the other fax is Sharp model, fax transmit the document by H2 mode. When set to "1", even if the other fax is Sharp model, fax transmit the document by MR mode.

SW-A6 No. 8 Reserved

Set to "0".

SW-B1 No. 1 ~ No. 4 Reserved

Set to "0".

SW-B1 No. 5 ~ No. 8 Recall times

Choice is made as to how many redials there should be.

SW-B2 No. 1 Dialing pause (sec/pause)

Pauses can be inserted between telephone numbers of direct dial connection. Selection of 4 sec or 2 sec pause is available.

SW-B2 No. 2 Dial tone detection (before auto dial)

Used to set YES/NO of dial tone detection in auto dialing.

SW-B2 No. 3 Reserved

Set to "0".

SW-B2 No. 4 Busy tone detection (after auto dial)

Used to set YES/NO of busy tone detection after auto dialing.

SW-B2 No. 5 Waiting time after dialing

This is time waiting for the opponent's signals after dialing.

SW-B2 No. 6, No. 7 Reserved

Set to "0".

SW-B2 No. 8 PBX connection

Used to select according to the connected line: PBX (Private Branch Exchange).

SW-B3 No. 1, No. 2 PBX recall function (R key select)

Used to set the operation mode of PBX recall when the R key is pressed. Setting is made according to the type of PBX.

No. 1=1, No. 2=1: Time break recall (=Flash) is performed.

No. 1=1, No. 2=0: Earth recall is performed.

SW-B3 No. 3 Reserved

Set to "0".

SW-B3 No. 4, No. 5 PBX select

Used to select the operation mode of PBX recall in auto dialing.

No. 4=1, No. 5=1: Time break recall (=Flash) is performed before dialing.

No. 4=1, No. 5=0: Earth recall is performed before dialing.

No. 4=0, No. 5=0: The PBX ID digit is automatically added when dialing to external line. PBX ID is up to 3 digits and entered in Option settings mode.

SW-B3 No. 6 ~ No. 8 Reserved

Set to "0".

SW-B4 No. 1, No. 2 Reserved

Set to "0".

SW-B4 No. 3 Dial mode

When using the pulse dial, set to 0. When using the tone dial, set to 1.

SW-B4 No. 4 Pulse → Tone change function by ✳ key

When setting to 1, the mode is changed by pressing the ✳ key from the pulse dial mode to the tone dial mode.

SW-B4 No. 5 ~ No. 8 Reserved

Set to "0".

SW-B5 No. 1 ~ No. 5 DTMF signal transmission level (Low)

The transmission level of DTMF signal is adjusted. (lower frequency)

00000: 0dBm

↓

11111: -15.5dBm (-0.5dBm x 31)

SW-B5 No. 6 ~ No. 8 Reserved

Set to "0".

SW-B6 No. 1 ~ No. 5 DTMF signal transmission level (High)

The transmission level of DTMF signal is adjusted. (higher frequency)

00000: 0dBm

↓

11111: -15.5 dBm (-0.5dBm x 31)

SW-B6 No. 6 ~ No. 8 Reserved

Set to "0".

SW-C1 No. 1, No. 2 Reading slice (Binary)

Used to determine the set value of reading density in standard/fine mode. The standard setting is "00" (Factory setting is "00")

SW-C1 No. 3, No. 4 Reading slice (Half tone)

Used to determine the set value of reading density in half tone mode. The standard setting is "00" (Factory setting is "00")

SW-C1 No. 5 Line density selection

Used to set the transmission mode which is automatically selected when the Resolution key is not pressed. In the copy mode, however, the fine mode is automatically selected unless the Resolution key is manually set to another mode.

SW-C1 No. 6 Half tone gray scale selection

Used to determine the reading gray scale in half tone mode.

When set to "0", gray scale is 64 levels.

When set to "1", gray scale is 16 levels.

SW-C1 No. 7 MTF correction in half tone mode

This allows selection of MTF correction (dimness correction) in the half tone mode.

When "NO" (=1) is selected, the whole image becomes soft and mild. This wording, however, clearness of characters will be reduced. Normally set to "YES" (=0).

SW-C1 No. 8 Reserved

Set to "0".

SW-D1 No. 1 ~ No. 4 Number of rings for auto receive

When the machine is set in the auto receive mode, the number of rings before answering can be selected. It may be set from one to four rings using a binary number. Since the facsimile telephone could be used as an ordinary telephone if the handset is taken off the hook, it should be programmed to the user's choice. If the soft switch was set to 1, direct connection is made to the facsimile. If a facsimile calling beep was heard when the handset is taken off the hook, press the START key and put the handset on the hook to have the facsimile start receiving. If it was set to 0 accidentally, receive ring is set to 1.

NOTE: If the machine is set to answer after a large number of rings, it may not be able to receive faxes successfully. If you have difficulty receiving faxes, reduce the number of rings to a maximum of 5.

SW-D1 No. 5 Automatic switching manual to auto receive mode

This soft switch is used to select whether the machine should switch to the auto receive mode after 5 rings in the manual receive mode or remain in the same way as SW-D1 No. 1, No. 2, No. 3 and No. 4 "0"1"0"1"(5 rings).

SW-D1 No. 6 Reserved

Set to "0".

SW-D1 No. 7 CI detection

Detection frequency of ring signal for auto reception is set. When set to 1, frequency is set to 13Hz or more.

SW-D1 No. 8 Reserved

Set to "0".

SW-D2 No. 1 ~ No. 4 Reserved

Set to "0".

SW-D2 No. 5 Caller ID function (SE/F ONLY)

Used for Caller ID function.

SW-D2 No. 6, No.7 Reserved

Set to "0".

SW-D2 No. 8 Caller ID detect during CI off (SE/F ONLY)

Detection of caller ID signal is performed as follows:
0 : First CI OFF only
1 : All of CI OFF

SW-E1 No. 1 Tel/Fax Automatic switching mode

Used to set automatic TEL/FAX switching mode or to set the normal fax mode.

SW-E1 No. 2, No. 3 Pseudo ringing time at the tel/fax automatic switching mode

Choice is made as to how long to rumble the dummy ringer on TEL/FAX automatic switching mode.

SW-E1 No. 4 Number of CNG signal detection at the tel/fax automatic switching mode

Used for detection of CNG in one tone or two tones in the TEL/FAX automatic switching mode.

SW-E1 No. 5, No. 6 Reserved

Set to "0".

SW-E1 No. 7 Post answer tone (transmit in Tel/Fax mode)

When set to "0", machine send the 800 Hz tones in TEL/FAX auto changeover mode.

SW-E1 No. 8 Reserved

Set to "0".

SW-E2 No. 1 ~ No. 4 Pseudo ringer sound volume

Used to adjust sound volume of pseudo ringer to the line (ring back tone) generated on selecting TEL/FAX. Setting is the reduce level from -5dBm output level.

SW-E2 No. 5 ~ No. 8 Reserved

Set to "0".

SW-F1 No. 1, No. 2 DTMF detect time

Used to set detect time of DTMF (Dual Tone Multi Frequency) used in remote reception (5 ✳ ✳).

The longer the detect time is, the less the error detection is caused by noises.

SW-F1 No. 3 Protection of remote reception (5 ✳ ✳) detect

Used to set the function of remote reception (5 ✳ ✳). When set to "1", the remote reception function is disabled.

SW-F1 No. 4 Remote reception with GE telephone

(Corresponding to TEL made by GE) P. B. X.

"1": Compatible with TEL mode by GE

"0": Not compatible

- When sending (5 ✳ ✳) for remote reception with a GE manufactured telephone remote reception may not take place because of special specifications in their DTMF.
  To overcome this, a soft SW is provided to change the modem setting to allow for remote reception.
- If this soft SW is set to "1", other telephone sets may be adversely affected.

SW-F1 No. 5 ~ No. 8 Remote operation code figures by external TEL (0 ~ 9)

Remote operation codes can be changes from 0 through 9. If set to greater than 9, it defaults to 9. The "5 ✳ ✳ " is not changed.
Ex-7 ✳ ✳ (Default: 5 ✳ ✳)

SW-F2 No. 1 CNG detection in STAND-BY mode

When setting to "1", the CNG signal detection function during standby stops.

SW-F2 No. 2, No. 3 Number of CNG detect (AM mode)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 4, No. 5 Number of CNG (STAND-BY mode)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 6 ~ No. 8 Reserved

Set to "0".

SW-G1 No. 1 ~ No. 4 Quiet detect time

When an answering machine is connected, if a no sound state is detected for a certain period of time, the machine judges it as a transmission from a facsimile machine and automatically switches to the FAX mode.

SW-G1 No. 5 ~ No. 8 Quiet detect start timing

Inserts a pause before commencing quiet detection.

SW-G2 No. 1 ~ No. 8 Off hook hold

Used to set Off hook hold time by binary input.

(0 to 255 seconds)

SW-G3 No. 1, No. 2 OGM detect timer

This is used to change the OGM detection time for answering machine hook up detection.

SW-G3 No. 3, No. 4 Reserved

Set to "0".

SW-G3 No. 5, No. 6 Section time of quiet detection

The switch which sets the time from the start of detection function to the end of the function.

SW-G3 No. 7, No. 8 Reserved

Set to "0".

SW-H1 No. 1 ~ No. 3 Reserved

Set to "0".

SW-H1 No. 4 Busy tone continuous sound detect time

Set detecting time busy tone continuous sound for 5 seconds or as is PTT.

SW-H1 No. 5 Reserved

Set to "0".

SW-H1 No. 6 Busy tone detect continuation sound detect (during ICM: for internal A.M.)

Used to select detection of the continuous sound of certain frequency.

SW-H1 No. 7 Reserved

Set to "0".

SW-H1 No. 8 Busy tone detect intermittent sound detect (during ICM: for internal A.M.)

Used to select detection of the intermittent sound of certain frequency.

SW-H2 No. 1, No. 2 Busy tone detection pulse number

Used to set detection of Busy tone intermittent sounds.

SW-H2 No. 3 Fax switching when A.M. full

If the answering machine's memory (tape) is full and there is no response, the machine automatically switches to Fax reception.

SW-H2 No. 4 ~ No. 8 Reserved

Set to "0".

SW-I1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I3 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I4 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I5 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I6 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I7 No. 1 ~ No. 8 Reserved

Set to "0".

SW-J1 No. 1 Activity report print

This soft switch is used to select: whether or not to print out the activity report when the memory is full. An activity report can be printed when the following key entry command is made.

"FUNCTION", "2", "#", "START"

After producing the activity report, all the data in the memory will be cleared.

When the switch function is set to "0" (no), the data in the memory will be deleted from the oldest as it reaches the maximum memory capacity.

SW-J1 No. 2 Total communication hours and pages print

Used to make a choice of whether the total communication time and pages are recorded in the activity report.

SW-J1 No. 3 Sender's phone number setting

Used to make a choice of whether the registered sender's phone number can be changed or not. If the switch is set to "1", new registration of the sender's phone number is disabled to prevent accidental wrong input.

SW-J1 No. 4, No. 5 Reserved

Set to "0".

SW-J1 No. 6 Summer time setting

Used to set YES/NO of automatic clock adjustment for European summer time.

SW-J1 No. 7, No. 8 Ringer volume

Used to adjust ringing volume.

SW-J2 No. 1, No. 2 Speaker volume (3 stages)

Used to adjust sound volume from a speaker.

SW-J2 No. 3 Polling key

If this switch is set to 1, the last of Rapid key works as polling key.

SW-J2 No. 4 ~ No. 8 Reserved

Set to "0".

SW-J3 No. 1 Automatic cover sheet

The machine automatically generates a cover sheet and sends it as the last page of each transmission.

SW-J3 No. 2 ~ No. 4 Communication result printout (Transaction report)

Every communication, the result can be output. As usual, it is set to print the timer sending communication error alone. If No. 2: 0 No. 3: 1 No. 4: 0 are set, printing is always on (printed even if it is normally ended).

000: Error, timer and memory sending/receiving

001: Sending

010: Continuous printing

011: Not printed

100: Communication error

SW-J3 No. 5 ~ No. 8 Reserved

Set to "0".

SW-K1 No. 1 Entering DIAG mode by pressing SPEED key

A bit which is used in the production process only. When the SPEED key is pressed, the switch is changed from the stand-by state to the DIAG mode.

SW-K1 No. 2 Black list (F ONYL)

This bit is used to enable (1) or disable (0) the black list management (in automatic dialing, when a number is called unsuccesfully 3 times, it will not be recalled until a direct user operation such as keypad, rapid, speed or redial key).

SW-K1 No. 3 ~ No. 8 Reserved

Set to "0".

SW-L1 No. 1 ~ No. 4 Reserved

Set to "0".

SW-L1 No. 5 Cut off mode (COPY mode)

Whether the excessive part is printed on the next recording paper or discarded is selected to copy a document which is longer than the recording paper.

SW-L1 No. 6 A4 Paper enable

The use of recording paper of A4 is enabled.

SW-L1 No. 7 LEGAL and LETTER paper enable

The use of recording paper of LEGAL and LETTER is enabled.

SW-L1 No. 8 2 IN 1 mode

A function to print transmitted data of two pages on one sheet.

SW-L2 No. 1, No. 2 Paper set size

At present size of the recording paper.

SW-L2 No. 3 Automatic reduce of receive

If set to 1, it is reduced automatically when receiving.

SW-L2 No. 4 Print contrast

0: Normal.
1: Light

SW-L2 No. 5 Reception reduction ratio in case of memory full

This model is designed so that the print is started according to the setting of SW-L2 No.3 when reception of one page is completed. However, if the memory is filled with data before completion of reception of one page, the print is started with the reduction ratio which is set with this switch.

SW-L2 No. 6 ~ No. 8 Reserved

Set to "0".

SW-M1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-M2 No. 1 ~ No. 8 Reserved

Set to "0".

[3] Troubleshooting

Refer to the following actions to troubleshoot any of the problems mentioned in 1-4.

[1] A communication error occurs.

[2] Image distortion produced.

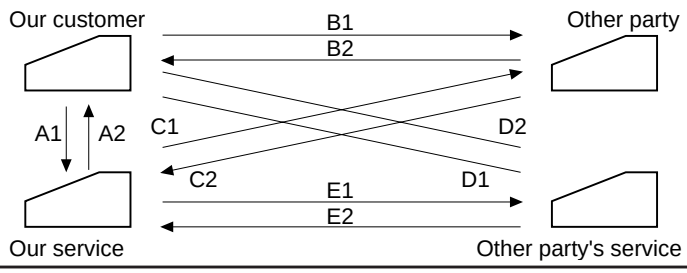
[3] Unable to do overseas communication.

[4] Communication speed slow due to FALLBACK.

- Increase the transmission level SOFT SWITCH A4-1, 2, 3, 4, 5. May be used in case [1] [2] [3].
- Decrease the transmission level SOFT SWITCH A4-1, 2, 3, 4, 5. May be used in case [3].
- Apply line equalization SOFT SWITCH A5-1, 2. May be used in case [1] [2] [3] [4].
- Slow down the transmission speed SOFT SWITCH A2-1, 2, 3, 4. May be used in case [2] [3].
- Replace the TEL/LIU PWB. May be used in all cases.
- Replace the control PWB. May be used in all cases.

* If transmission problems still exist on the machine, use the following format and check the related matters.

TO: ATT: Ref.No. :
CC: ATT: Date :
FM: Dept :
Sign :

***** Facsimile communication problem *****			Ref.No.:
From: Mr.	Fax Tel No.:		Date:
Our customer	Name		Tel No.
	Address		Fax No.
	Contact person		Model name
Other party	Name		Tel No.
	Address		Fax No.
	Contact person		Model name
Problem mode	Line: Domestic / international	Model: G3	Phase: A, B, C, D.
	Reception / Transmission	Automatic reception / Manual reception Automatic dialing / Manual dialing / Others	
Frequency:		% ROM version:	
Confirmation item			Please mark problem with an X. No problem is: 0. A1 A2 B1 B2 C1 C2 D1 D2 E1 E2 Transmission level setting is ( ) dB at our customer Transmission level ( ) dBm Reception level ( ) dBm By level meter at B1 and B2
Comment			
Countermeasure			
**** Please attach the G3 data and activity report on problem. ****			

* Please complete this report before calling the “TAC” hotline if problem still occurs.

[4] Error code table

1. Communication error code table

G3 Transmission

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSF, DIS	Cannot recognize DCS signal by echo etc. Cannot recognize NSS signal (FIF code etc)
2	CFR	Disconnects line during reception (carrier missing etc)
3	FTT	Disconnects line by fall back
4	MCF	Disconnects line during reception of multi page Cannot recognize NSS, DCS signal in the case of mode change
5	PIP or PIN	The line is hung up without replying to telephone request from the receiving party.
6	RTN or RTP	Cannot recognize NSS, DCS signal after transmit RTN or RTP signal.
7	No signal or DCN	No response in receiver side or DCN signal received* (transmitter side)
8	–	Owing to error in some page the error could not be corrected although the specified number of error retransmissions were attempted.
11	–	Error occurred after or while reception by the remote (receiving) machine was revealed to be impossible.
12	–	Error occurred just after fallback.
13	–	Error occurred after a response to retransmission end command was received.

G3 Reception

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSS, DCS	Cannot recognize CFR or FTT signal Disconnects line during transmission (line error)
2	NSC, DTC	Cannot recognize NSS signal (FIF code etc)
3	EOP	Cannot recognize MCF, PIP, PIN, RTN, RTP signal
4	EOM	Cannot recognize MCF, PIP, PIN, RTN, RTP signal in the case of mode change
5	MPS	The line is hung up without replying to communication request.
6	PR1-Q	Cannot recognize PIP, PIN signal in the case of TALK request
7	No signal or DCN	No response in transmitter (cannot recognize DIS signal) or DCN signal received* (receiver side)
8	–	Error occurred upon completion of reception of all pages.
9	–	Error occurred when mode was changed or Transmission/Reception switching was performed.
10	–	Error occurred during partial page or physical page reception.
11	–	Error occurred after or during inquiry from the remote (transmitting) machine as to whether reception is possible or not.
12	–	Error occurred during or just after fallback.
13	–	Error occurred after the retransmission end command was received.

CHAPTER 3. MECHANISM BLOCKS

[1] General description

1. Document feed block and diagram

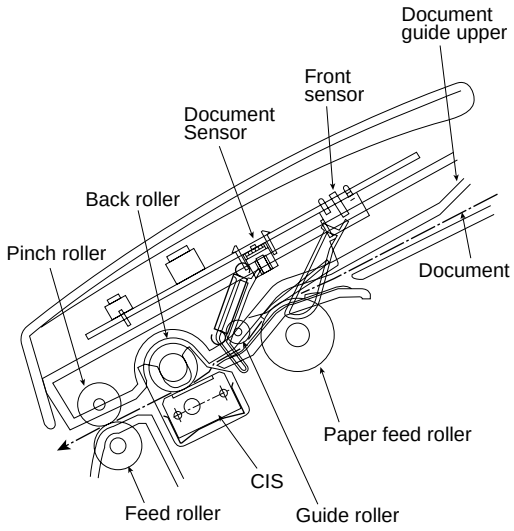


Fig. 1

2. Document feed operation

1) The original, which is set in the document hopper, feeds automatically when the front sensor is activated. This in turn activates the pulse motor which drives the document supply roller. The document stops when the lead edge is detected by the document sensor.
2) The lead edge of the original is fed a specified number of pulses after the lead edge of the document is detected for the reading process to begin.
3) The trailing edge of the original is fed a specific number of pulses after the trailing edge of the document deactivates the document sensor. The read process then stops and the original is discharged.
4) When the front sensor is in the OFF state (any document is not set up in the hopper guide), the drive will be stopped when the document is discharged.

3. Hopper mechanism

3-1. General view

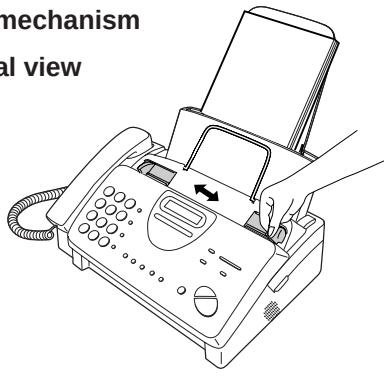


Fig. 2

The hopper section contains document guides that are used to adjust the hopper to the width of the original document. This ensures that the original feeds straight into the fax machine for scanning.
Document width: 148 mm to 216 mm (A5 longitudinal size to Letter longitudinal size)
NOTE: Adjust the document guide after setting up the document.

3-2. Automatic document feed

1) Use of the paper feed roller and separation rubber plate ensures error-free transport and separation of documents. The plate spring presses the document to the paper feed roller to assure smooth feeding of the document.
2) Document separation method: Separation rubber plate

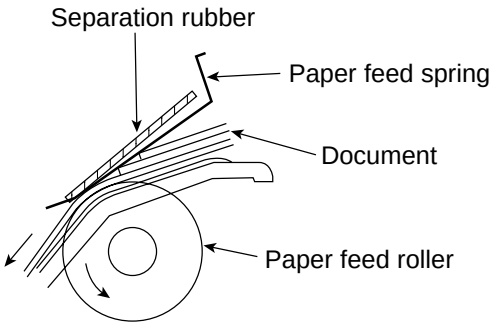


Fig. 3

3-3. Documents applicable for automatic feed

	4x6 series (788mm x 1091mm x 1000mm sheets)		Square meter series	
	Minimum	Maximum	Minimum	Maximum
Feeder capacity	10 sheets, max.			
Paper weight	45kg	64.3kg	52g/m^2	74.3g/m^2
Paper thickness (ref.)	0.06mm	0.09mm	0.06mm	0.09mm
Paper size	B6 (128mm x 182mm) ~ A4 (210mm x 297mm), Letter (216mm x 279mm)			

NOTE: Double-side coated documents and documents on facsimile recording paper should be inserted manually. The document feed quantity may be changed according to the document thickness.

Documents corresponding to a paper weight heavier than 64.3kg (74.3g/m^2) and lighter than 135kg (157g/m^2) are acceptable for manual feed.

Documents heavier than 135kg in terms of the paper weight must be duplicated on a copier to make it operative in the facsimile.

3-4. Loading the documents

1) Make sure that the documents are of suitable size and thickness, and free from creases, folds, curls, wet glue, wet ink, clips, staples and pins.
2) Place documents face down in the hopper.
   i) Adjust the document guides to the document size.
   ii) Align the top edge of documents and gently place them into the hopper. The first page under the stack will be taken up by the feed roller to get ready for transmission.

NOTES: 1) Curled edge of documents, if any, must be straighten out.
2) Do not load the documents of different sizes and/or thicknesses together.

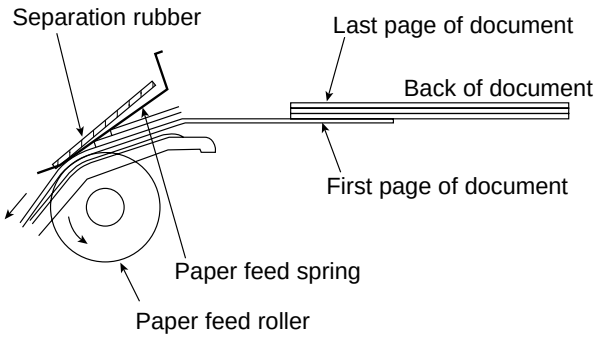


Fig. 4

3-5. Documents requiring use of document carrier

1) Documents smaller than B6 (128mm x 182mm).
2) Documents thinner than the thickness of 0.06mm.
3) Documents containing creases, folds, or curls, especially those whose surface is curled (maximum allowable curl is 5mm).
4) Documents containing tears.
5) Carbon-backed documents. (Insert a white sheet of paper between the carbon back and the document carrier to avoid transfer of carbon to the carrier.)
6) Documents containing an easily separable writing material (e.g., those written with a lead pencil).
7) Transparent documents.
8) Folded or glued documents.

Document in document carrier should be inserted manually into the feeder.

4. Document release

4-1. General

To correct a jammed document or to clean the document running surface, pull the insertion side of document center of the operation panel. To open the upper document guide, the operation panel must be opened first.

4-2. Cross section view

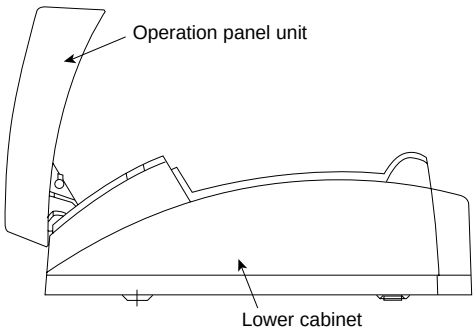


Fig. 5

5. Recording block

(1) General view

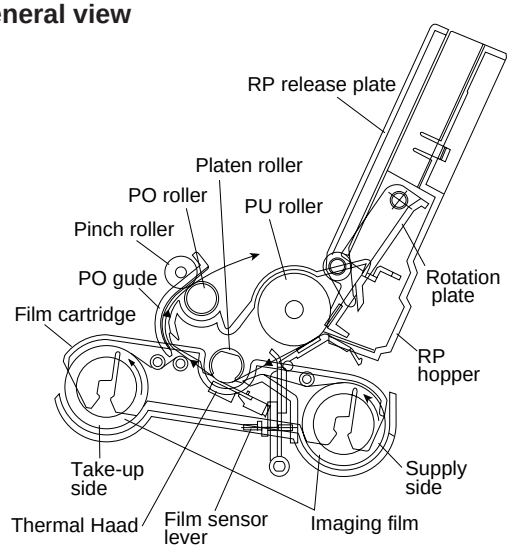


Fig. 6

5-1. Driving

In the drive mechanism, the rotating force of the pulse motor for both transmission and reception is transmitted to the paper supply roller, the recording paper feed roller and imaging film drive gear through the pulse motor axle gear, reduction gear and planetary gear.

5-2. Recording

This equipment employs the thermal transcription system which used the thermal head imaging film.

1) Thermal head

The thermal head is composed of 2,016 heating elements in traverse line, and the resolution power is 8 dots/mm. The maximum speed is 10 ms/line.

2) Structure of recording mechanism

Recording is achieved by applying a suitable pressure to the thermal head through the imaging film of the recording paper feed roller and the recording paper.
The main scanning is electronically done, and the sub-scanning is me chanically done (by sending the recording paper with the recording paper feed roller).

3) Recording paper transfer sequence

a) The recording paper stored in the RP hopper is fed with the PU roller, and the recording paper is stopped when the P-IN sensor is turned on by sensing its lead edge.

b) Hereafter, the imaging film and recording paper are transferred with the recording paper feed roller, and thermal transcription is done on the recording paper.

c) After thermal transcription, the imaging film is taken up by the roller on the take-up side, and the recording paper is discharged by the PO roller.

As basic, the density unevenness mainly results from the longitudinal misalignment of the thermal head to the heater line. Otherwise, the head is in uneven contact with the recording paper feed roller, or the imaging film is wrinkled.

The following items are described as the simplified checking method.

① Are the power and signal cables of the thermal head suitably treated?

② Does the same symptom appear even if the thermal head pres-sure spring is replaced?

③ Is the feed roller of the recording paper concentric? (Density is uneven at intervals.)

④ Does the same symptom appear even if the thermal head is replaced?

⑤ Is the imaging film stained or wrinkled?

[2] Disassembly and assembly procedures

- This chapter mainly describes the disassembly procedures. For the assembly procedures, reverse the disassembly procedures.
- Easy and simple disassembly/assembly procedures of some parts and units are omitted. For disassembly and assembly of such parts and units, refer to the Parts List.
- The numbers in the illustration, the parts list and the flowchart in a same section are common to each other.
- To assure reliability of the product, the disassembly and the assembly procedures should be performed carefully and deliberately.

1 Bottom plate

Parts list (Fig. 1)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	4	Head earth cable	1
2	Screw (3×10)	9	5	Screw (3×6)	1
3	Screw (3×5)	2	6	Shield sheet	1
			7	Bottom plate	1

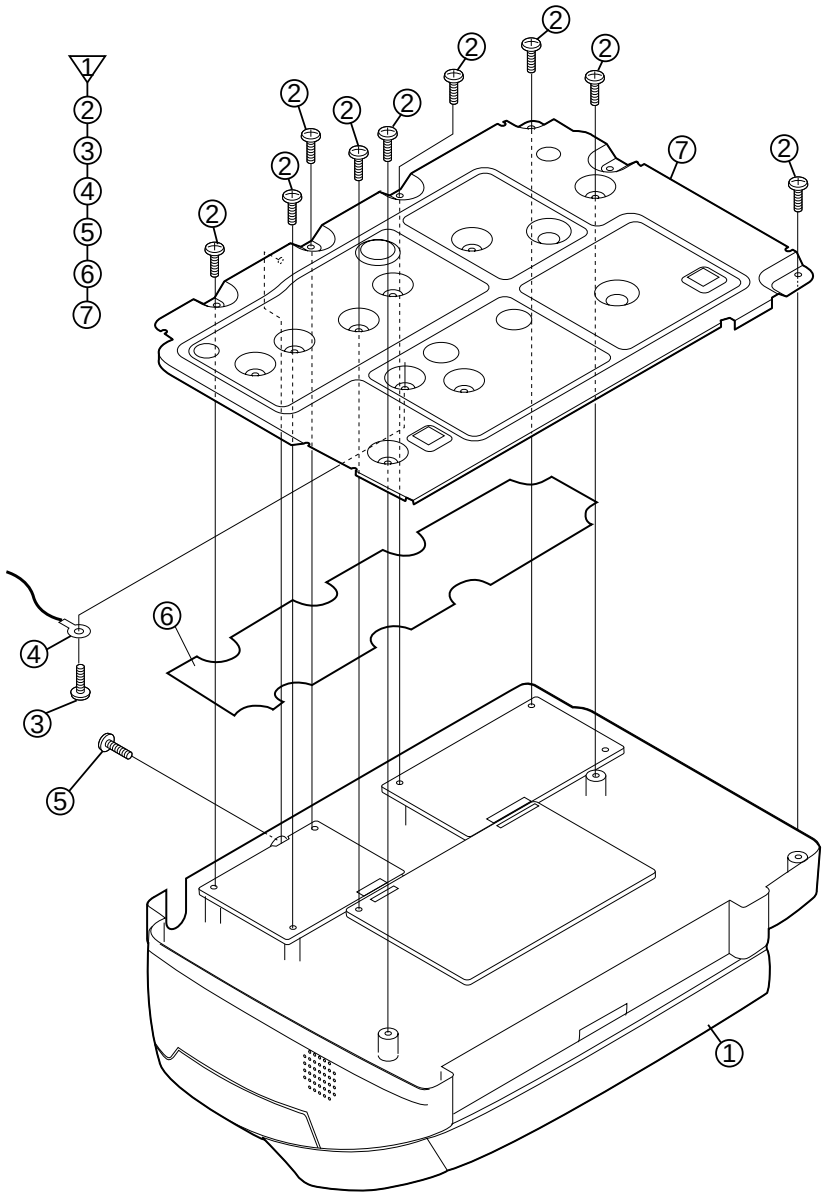


Fig. 1

2 PWB's, drive unit, AC cord ass'y and speaker

Parts list (Fig. 2)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	8	AC cord ass'y	1
2	Connector	3	9	Screw (3×6)	1
3	Cable	6	10	ARG cable	1
4	Control PWB unit	1	11	Screw (3×10)	2
5	TEL/Liu PWB unit	1	12	Drive unit	1
6	Power supply PWB unit	1	13	Speaker hold spring	1
7	Screw (4×6)	1	14	Speaker	1

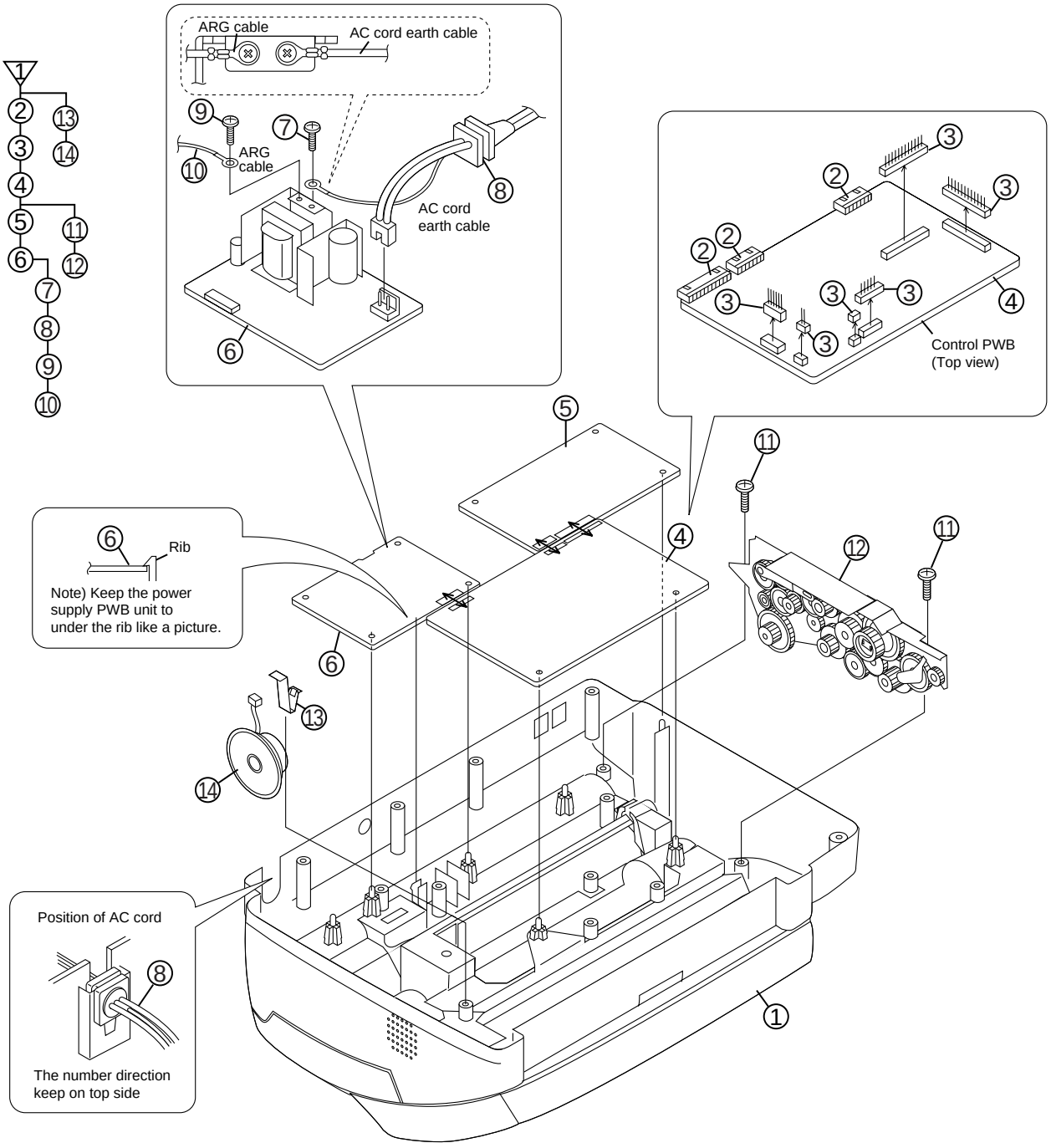
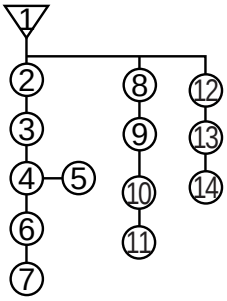

ARG cable
AC cord earth cable
ARG cable
AC cord earth cable
Control PWB (Top view)
Rib
Note) Keep the power supply PWB unit to under the rib like a picture.
Position of AC cord
The number direction keep on top side

Fig. 2

3 Paper roller etc. and sensor lever

Parts list (Fig. 3)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	8	Platen lock bracket	1
2	Sheet A	1	9	Platen lock lever, left	1
3	P-IN sensor lever B	1	10	Platen lock lever, right	1
4	PE sensor lever B	1	11	Platen lock lever spring	1
5	PE sensor lever spring B	1	12	PO roller	1
6	Screw (3×10)	1	13	Transfer bearing	2
7	BT gear ass'y	1	14	Back roller gear	1



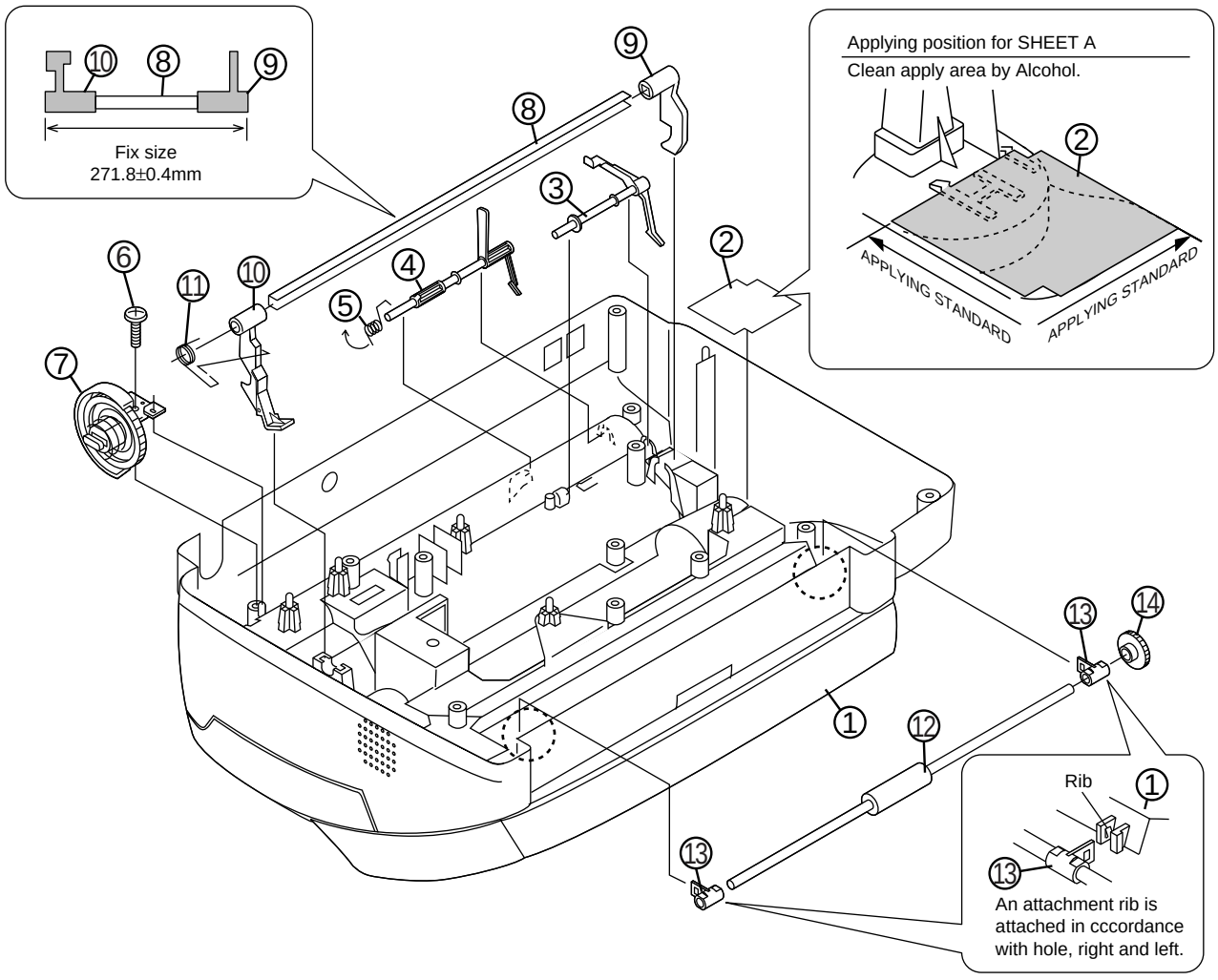


Fig. 3

4 Drive frame

Parts list (Fig. 4)

No.	Part name	Q'ty	No.	Part name	Q'ty	No.	Part name	Q'ty
1	Screw (3×10)	2	9	Idler gear, 52Z	1	17	Reduction gear, 4	1
2	Motor	1	10	Reduction gear, 3	1	18	Planet gear lever C ass'y	1
3	Motor plate	1	11	Reduction gear, 2	1	19	Planet gear lever B ass'y	1
4	Take up gear	1	12	Reduction gear, 5	1	20	Reduction gear, 1	1
5	Slip gear ass'y	1	13	Reduction gear C	1	21	Cam hold spring	1
6	Reduction gear, 6	1	14	Link lever	1	22	Cam A	1
7	Planet gear lever D ass'y	1	15	Planet gear lever A ass'y	1	23	Cam B	1
8	Idler gear B	1	16	Idler gear, 30Z	3	24	Cam switch	1
						25	Drive frame	1

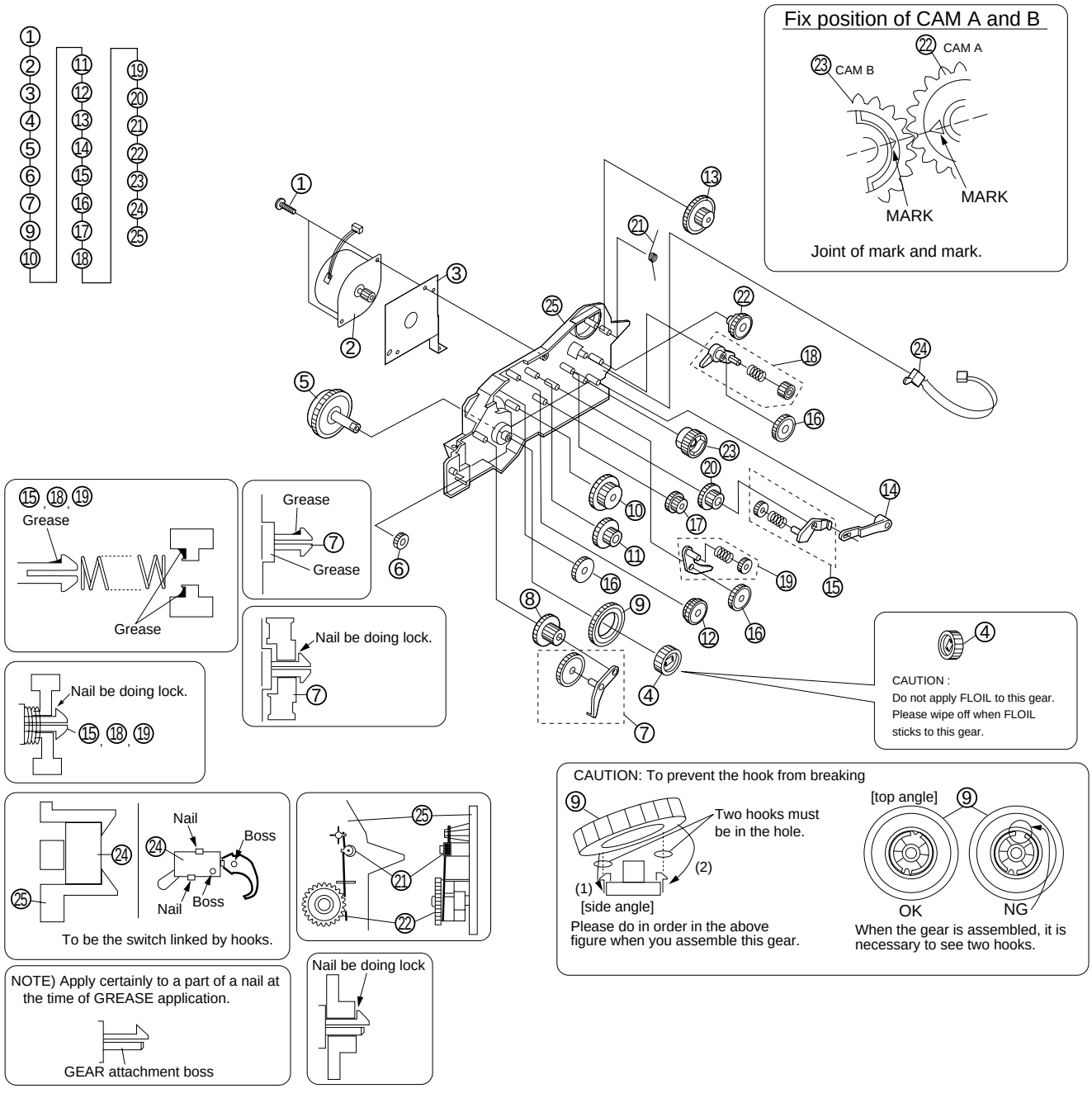
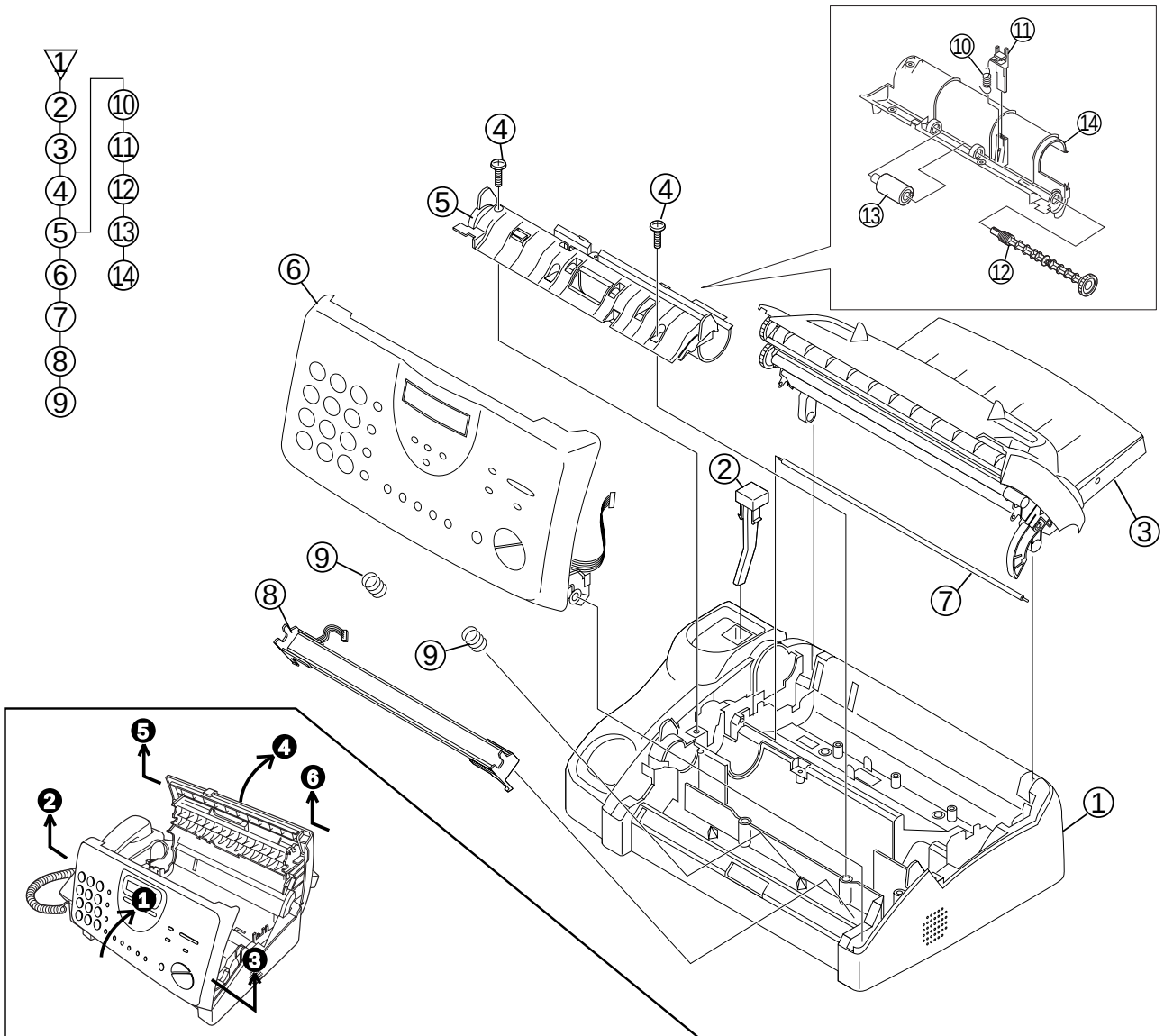


Fig. 4

5 Sub frame unit, original paper guide, operation panel unit and CIS unit

Parts list (Fig. 5)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	8	CIS unit	1
2	Hook switch lever	1	9	CIS spring	2
3	Sub frame unit	1	10	Cover switch spring	1
4	Screw (3×10)	2	11	Cover switch lever	1
5	Original paper guide unit	1	12	Feed roller shaft	1
6	Operation panel unit	1	13	Feed roller	1
7	Film guide shaft	1	14	Orignal paper guide	1



Operation panel unit disassembly

❶ Close insignificantly the operation panel unit from the FULL OPEN position.
❷ Shift the operation panel unit to the left side, and remove the left-side fulcrum.
❸ Shift the operation panel unit to the right side, and remove the right-side fulcrum.

Sub frame unit disassembly

❹ Fully open the sub frame unit.
❺ Shift the sub frame unit to the left side, and remove the left-side fulcrum.
❻ Shift the sub frame unit to the left side, and remove the right-side fulcrum.

Fig. 5

6 Upper cabinet and document guide upper unit

Parts list (Fig. 6)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Screw (3×8)	1	6	Operation panel PWB	1
2	Document guide upper unit	1	7	Direct key	1
			8	Mode key	1
3	Operation panel unit	1	9	Stop key	1
4	Screw (2×6)	5	10	Start key	1
5	Cable	1	11	12 key	1
			12	Upper cabinet	1

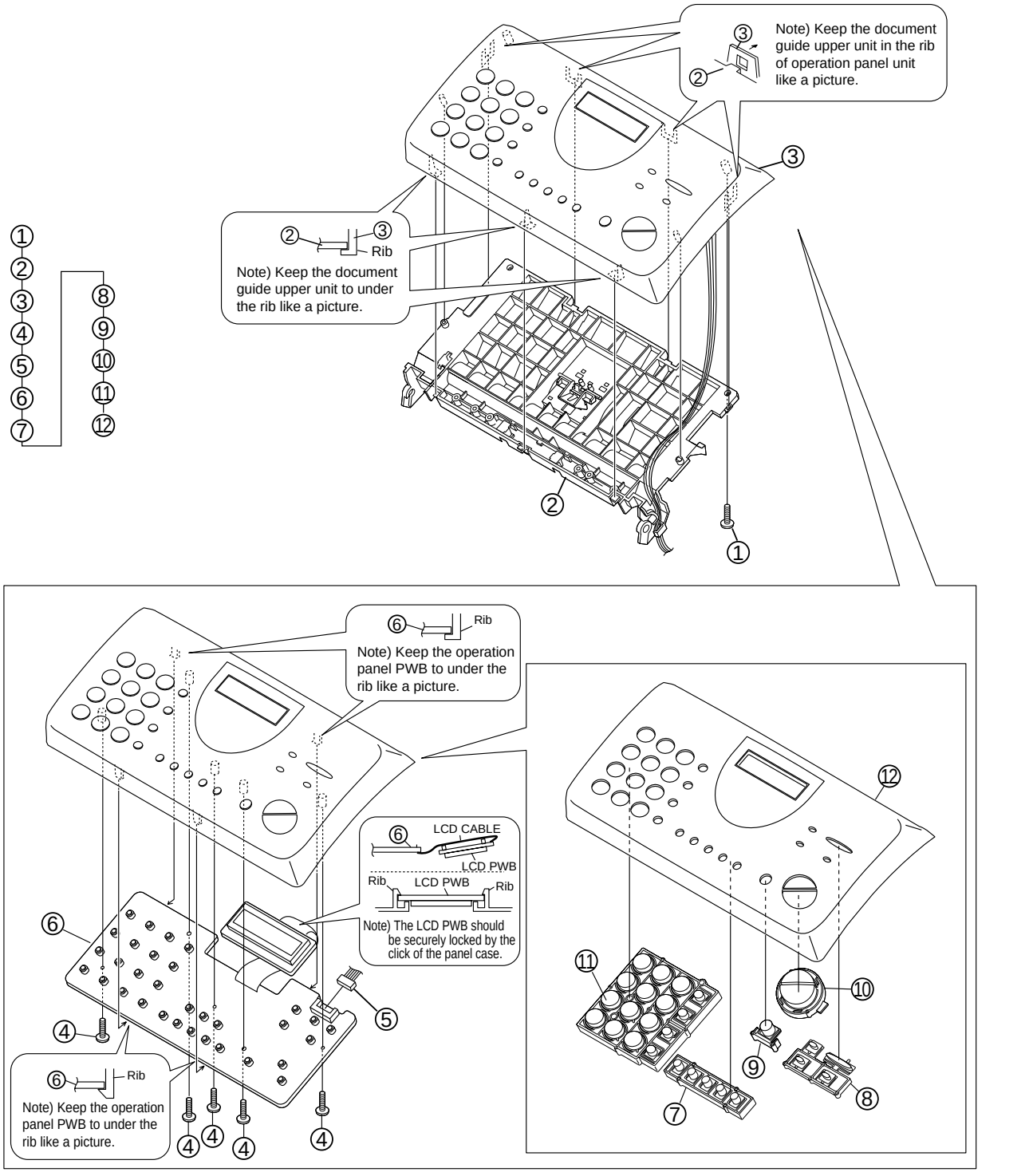

Note) Keep the document guide upper unit in the rib of operation panel unit like a picture.
Rib
Note) Keep the document guide upper unit to under the rib like a picture.
Rib
Note) Keep the operation panel PWB to under the rib like a picture.
LCD CABLE
LCD PWB
Rib
LCD PWB
Rib
Note) The LCD PWB should be securely locked by the click of the panel case.
Rib
Note) Keep the operation panel PWB to under the rib like a picture.

Fig. 6

7 Document guide upper

Parts list (Fig. 7)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Back roller gear	1	7	Separate spring	1
2	Transfer bearing	1	8	Separator plate	1
3	Back roller	1	9	Paper feed spring	1
4	Pinch roller spring	2	10	Separator rubber	1
5	Pinch roller	2	11	Guide roller	1
6	Pinch roller shaft	1	12	Document guide upper	1

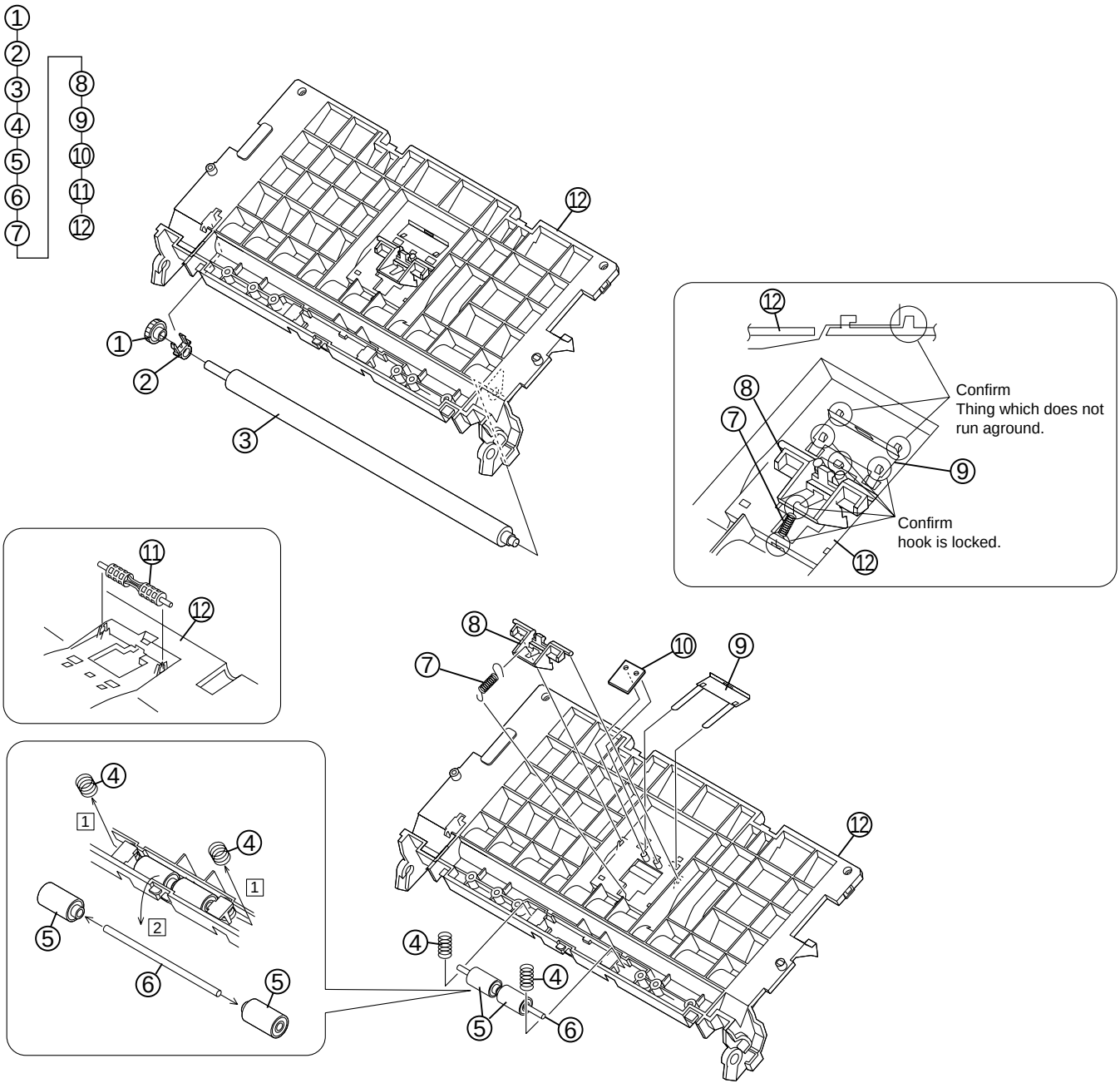


Fig. 7

8 Sub frame, top cover unit RP hopper unit

Parts list (Fig. 8)

No.	Part name	Q'ty	No.	Part name	Q'ty	No.	Part name	Q'ty
1	Top cover unit	1	10	PO pinch roller spring	2	19	Platen bearing, right	1
2	Screw (3×10)	2	11	PO pinch roller	2	20	Platen roller	1
3	Sub frame unit	1	12	PO guide	1	21	PU shaft	1
4	RP hopper unit	1	13	PE sensor lever	1	22	PU roller ass'y	1
5	Sub frame ass'y	1	14	PO gear	1	23	P-IN sensor lever spring	1
6	Screw (3×10)	1	15	PO roller ass'y	1	24	P-IN sensor lever	1
7	Tension gear	1	16	Film guide shaft	1	25	Sub frame	1
8	Tension spring	1	17	Platen gear	1	26	PO roller rubber	2
9	PO guide ass'y	1	18	Platen bearing, left	1	27	PO roller shaft	1

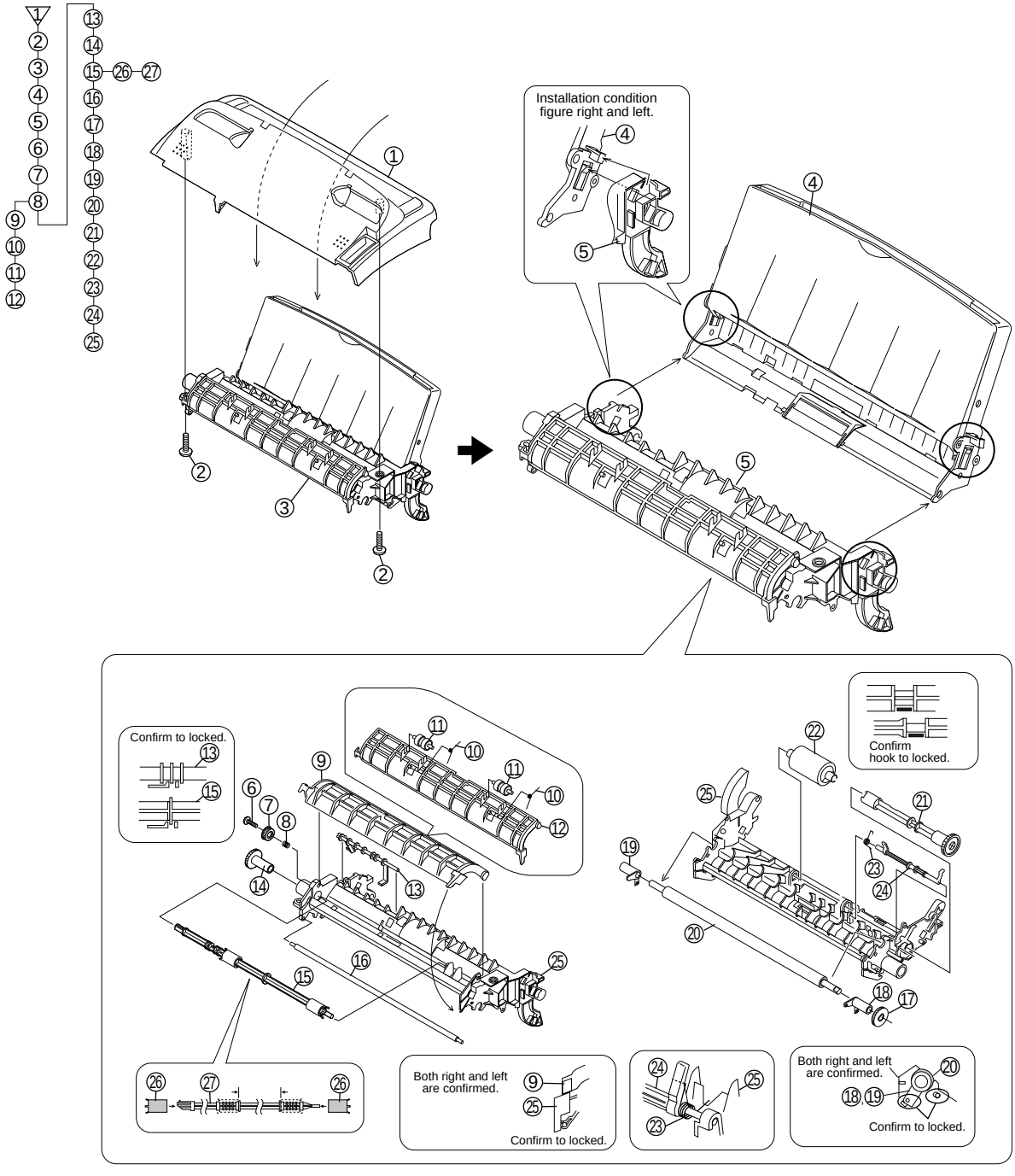

Installation condition figure right and left.
Confirm to locked.
Confirm hook to locked.
Both right and left are confirmed.
Confirm to locked.
Both right and left are confirmed.
Confirm to locked.

Fig. 8

9 Top cover and RP hopper

Parts list (Fig. 9)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Release knob	1	9	RP release plate	1
2	Screw	1	10	Rotation plate	1
3	Pinion gear	1	11	RP pad	1
4	Hopper spring	1	12	C-spring	1
5	Hopper guide, right	1	13	Separate plate	1
6	Hopper guide, left	1	14	Separate plate sheet	1
7	TC sheet	1	15	Separate spring	1
8	Top cover	1	16	A4 paper guide	1
			17	RP hopper	1

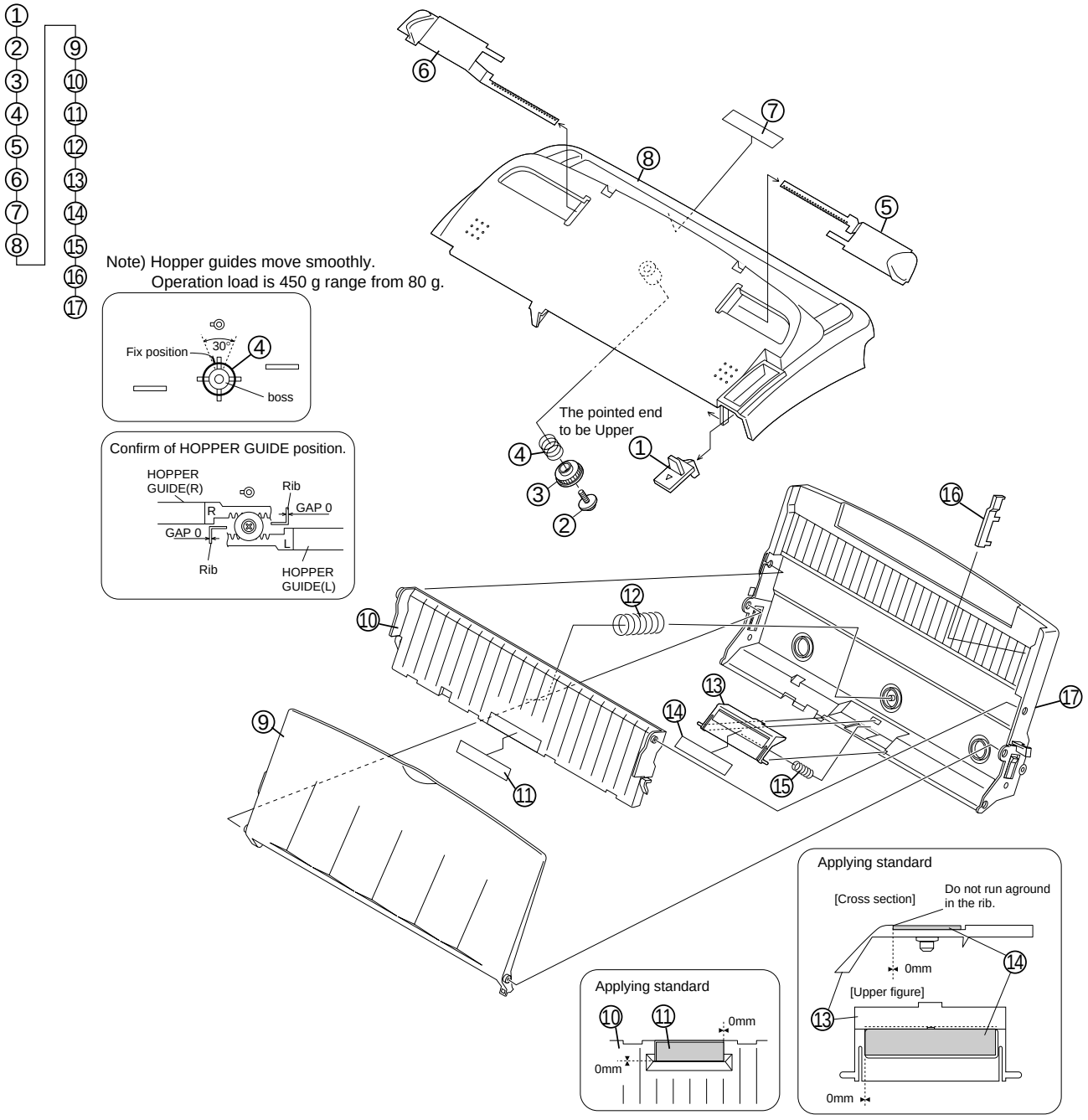


Fig. 9

10 Thermal head

Parts list (Fig. 10)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	12	Thermal head ass'y	1
2	Screw (3×10)	1	13	Head spring E	2
3	Head cover	1	14	Head spring B	2
4	Screw (3×10)	2	15	Head spring F	1
5	Head earth cable	1	16	Head cushion	2
6	Head unit	1	17	Head frame	1
7	Film sensor lever spring	1	18	Head cable	1
8	Film sensor lever	1	19	Screw (3×6)	1
9	Screw (3×10)	2	20	Head guide, right	1
10	Panel lock lever spring	2	21	Screw (3×6)	1
11	Head spring D	2	22	Head guide, left	1
			23	Thermal head	1

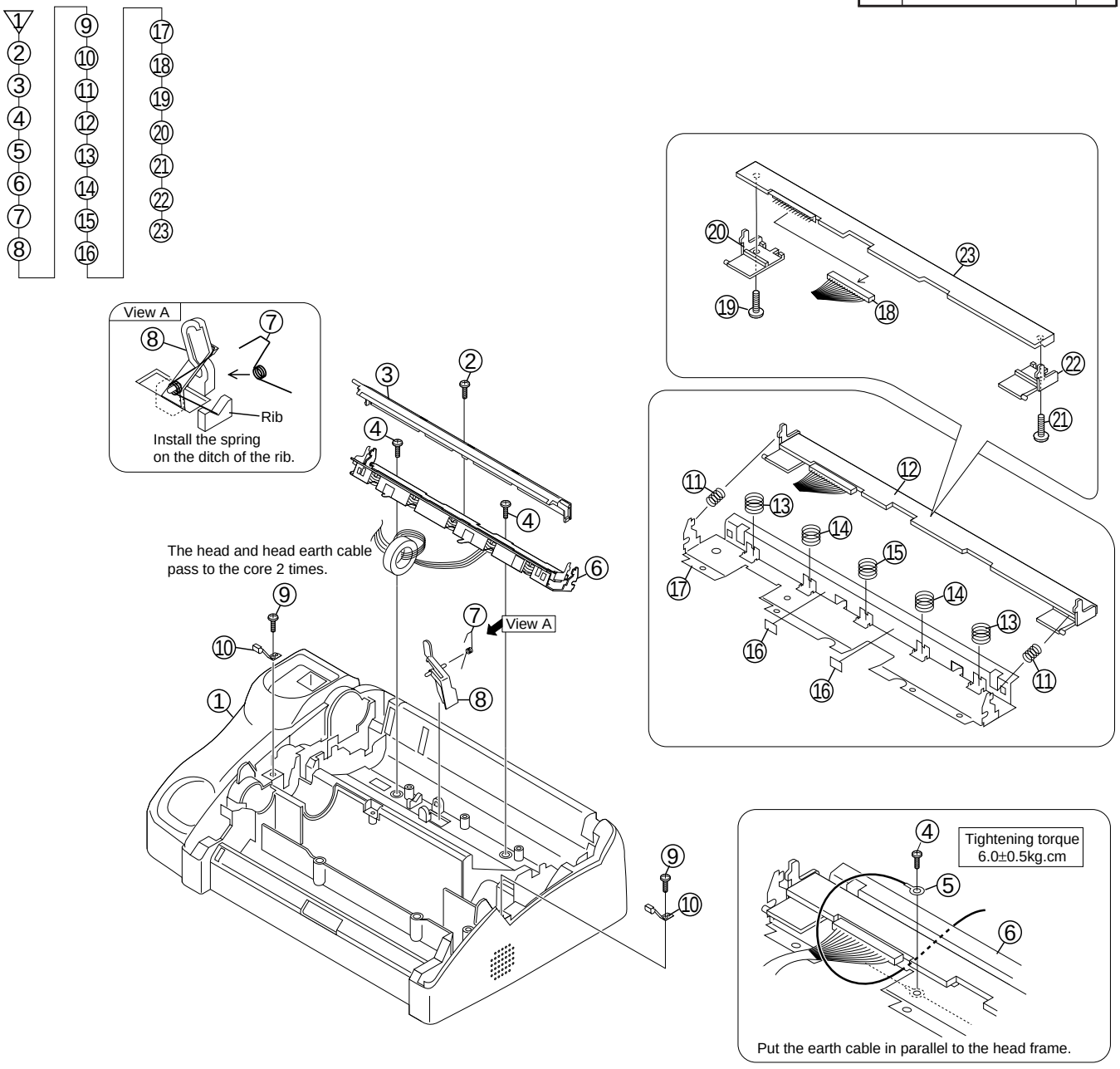


Fig. 10

11 Wire treatment

Parts list (Fig. 11)

No.	Part name	Q'ty
1	Screw (3×10)	1
2	Screw (4×6)	1
3	Core (F2064)	2
4	Core (F2063)	1
5	Screw (3×5)	1
6	Band	2
7	Screw (3×6)	1

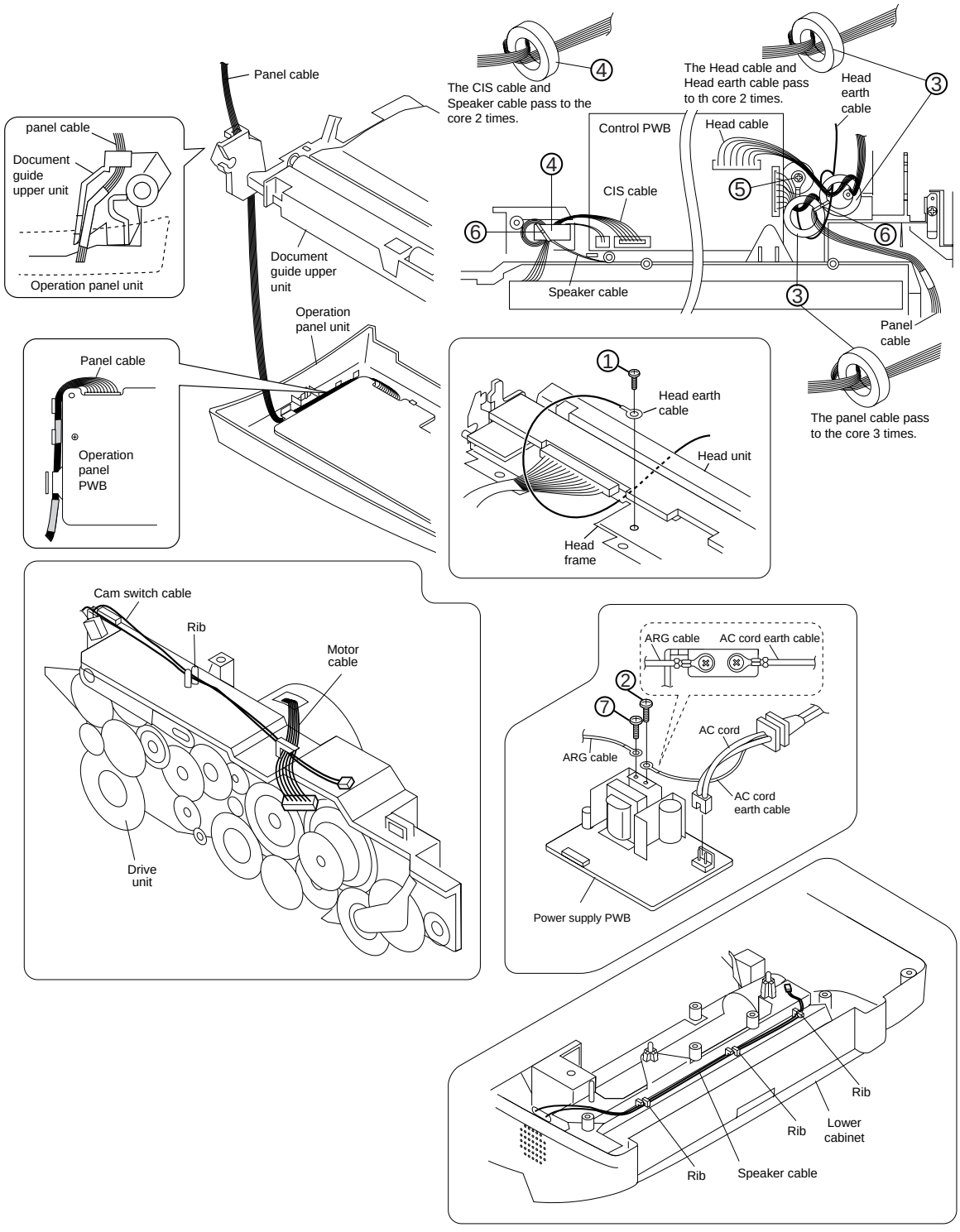
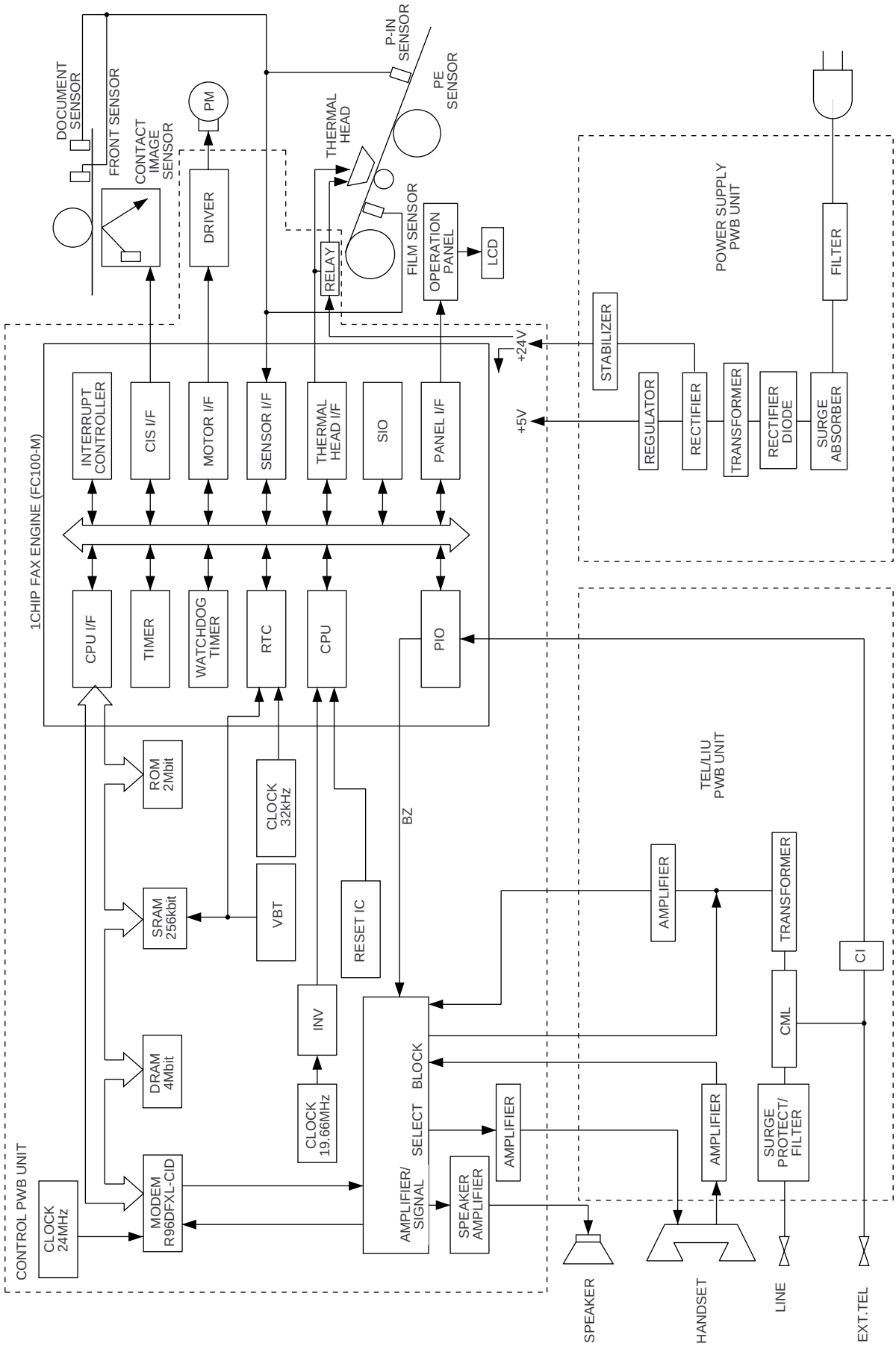


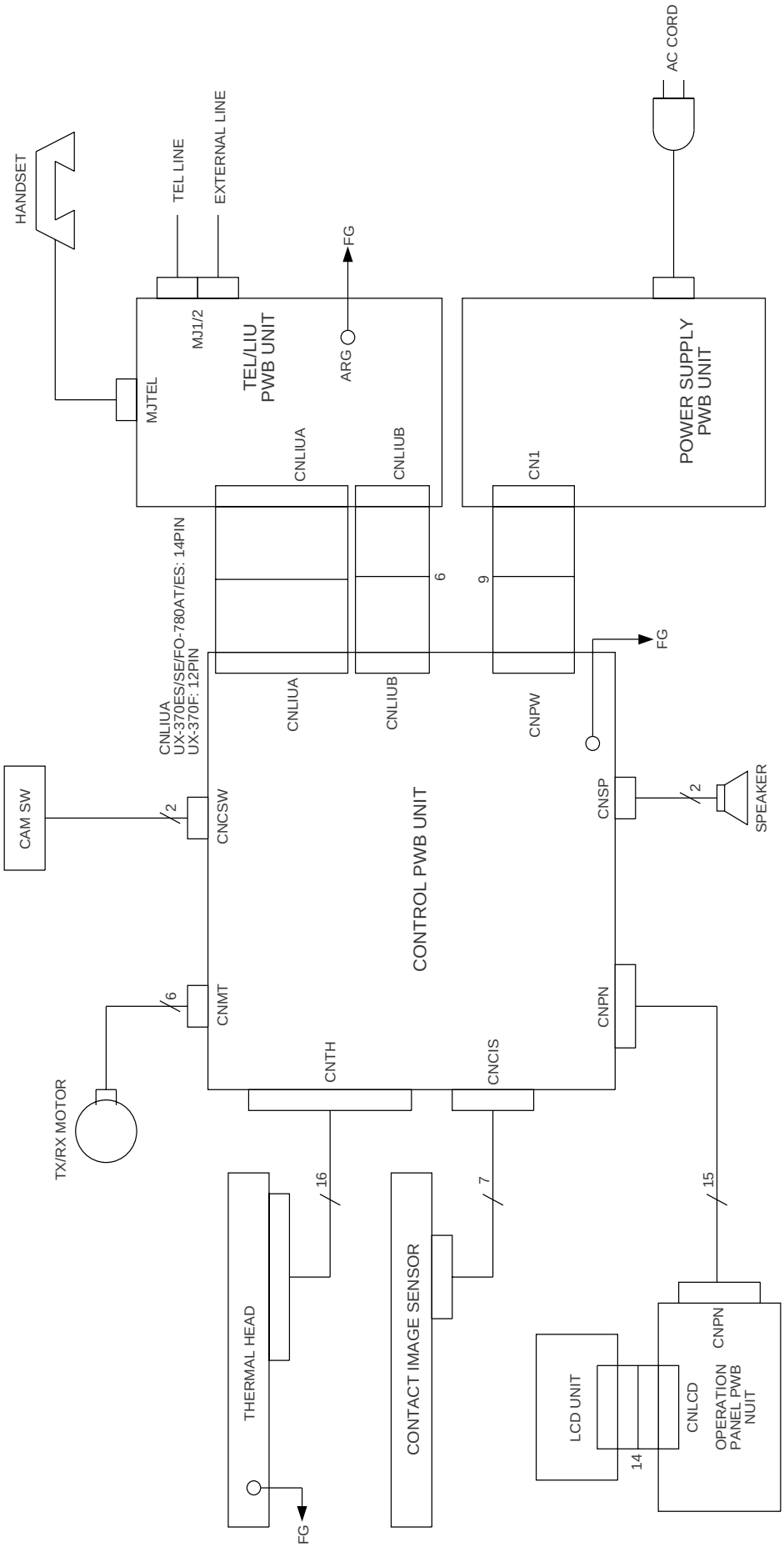
Fig. 11

CHAPTER 4. DIAGRAMS

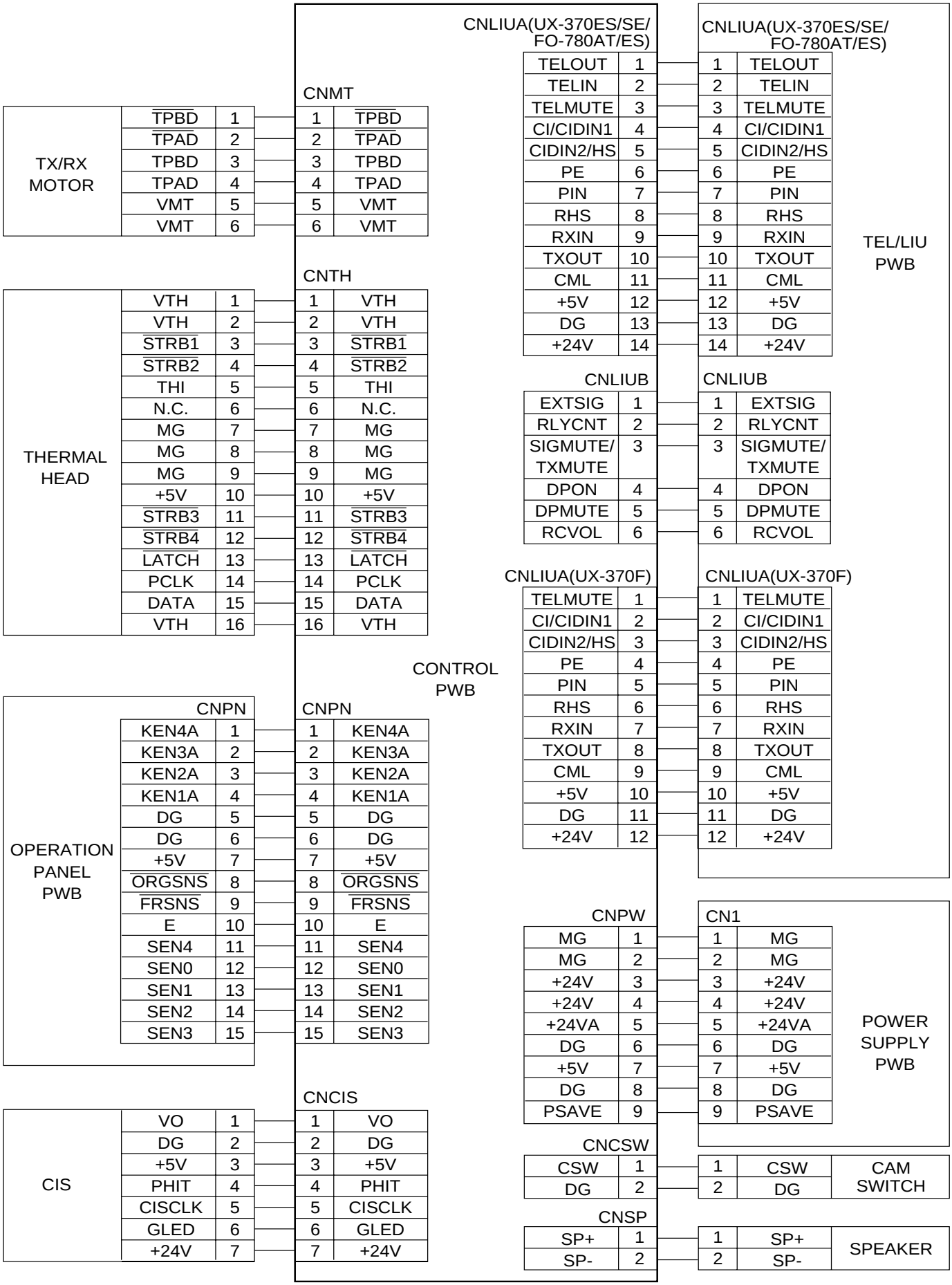
[1] Block diagram



[2] Wiring diagram



[3] Point- to-point diagram



CHAPTER 5. CIRCUIT DESCRIPTION

[1] Circuit description

1. General description

The compact design of the control PWB is obtained by using ROCKWELL(CONEXANT) fax engine in the main control section and high density printing of surface mounting parts. Each PWB is independent according to its function as shown in Fig. 1.

2. PWB configuration

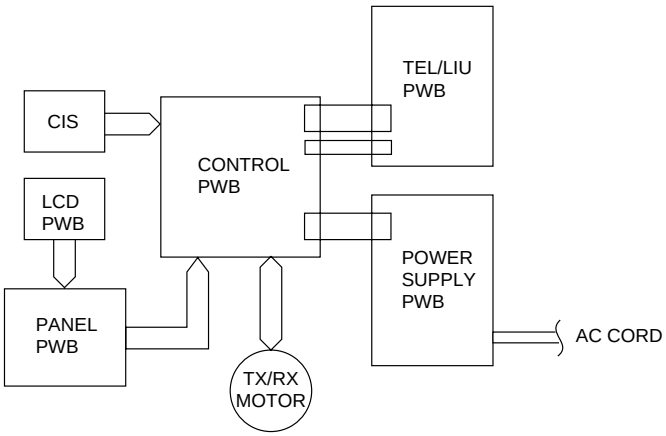


Fig. 1

1) Control PWB

The control PWB controls peripheral PWBs, mechanical parts, transmission, and performs overall control of the unit.
This machine employs a 1-chip modem (R96DFXL-CID) which is installed on the control PWB.

2) TEL/LIU PWB

This PWB controls connection of the telephone line to the unit.

3) Power supply PWB

This PWB provides voltages of +5V and +24V to the other PWBs.

4) Panel PWB

The panel PWB allows input of the operation keys.

5) LCD PWB

This PWB controls the LCD display.

3. Operational description

Operational descriptions are given below:

- Transmission operation

  When a document is loaded in standby mode, the state of the document sensor is sensed via the 1 chip fax engine (FC100M). If the sensor signal was on, the motor is started to bring the document into the standby position. With depression of the START key in the off-hook state, transmission takes place.
  Then, the procedure is sent out from the modem and the motor is rotated to move the document down to the scan line. In the scan processor, the signal scanned by the CIS is sent to the internal image processor and the AD converter to convert the analog signal into binary data. This binary data is transferred from the scan processor to the image buffer within the RAM and encoded and stored in the transmit buffer of the RAM. The data is then converted from parallel to serial form by the modem where the serial data is modulated and sent onto the line.

- Receive operation

  There are two ways of starting reception, manual and automatic.
  Depression of the START key in the off-hook mode in the case of manual receive mode, or CI signal detection by the LIU in the automatic receive mode.

  First, the FC100M controls the procedure signals from the modem to be ready to receive data. When the program goes into phase C, the serial data from the modem is converted to parallel form in the modem interface of the 1 chip fax engine (FC100M) which is stored in the receive buffer of the RAM. The data in the receive buffer is decoded software-wise to reproduce it as binary image data in the image buffer. The data is DMA transferred to the recording processor within the FC100M which is then converted from parallel to serial form to be sent to the thermal head. The data is printed line by line by the FC100M which is assigned to control the motor rotation and strobe signal.

- Copy operation

  To make a copy on this facsimile, the COPY key is pressed when the machine is in stand-by with a document on the document table and the telephone set is in the on-hook state.

  First, depression of the COPY key advances the document to the scan line. Similar to the transmitting operation, the image signal from the CIS is converted to a binary signal in the DMA mode via the 1 chip fax engine (FC100M) which is then sent to the image buffer of the RAM. Next, the data is transferred to the recording processor in the DMA mode to send the image data to the thermal head which is printed line by line. The copying takes place as the operation is repeated.

[2] Circuit description of control PWB

1. General description

Fig. 2 shows the functional blocks of the control PWB, which is composed of 5 blocks.

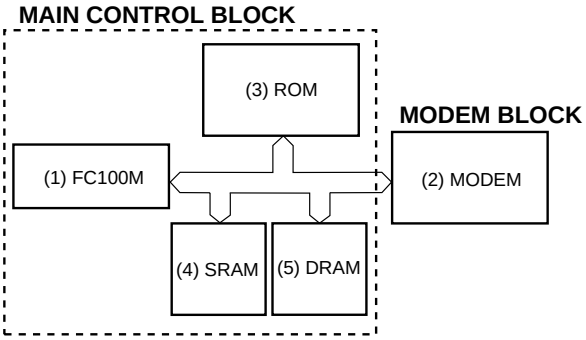


Fig. 2 Control PWB functional block diagram

2. Description of each block

(1) Main control block

The main control block is composed of ROCKWELL (CONEXANT) 1 chip fax engine (FC100M), ROM (2Mbit), SRAM (256Kbit), DRAM (4Mbit) and Modem (R96DFXL-CID).

1) FC100M (IC9) : pin-144 QFP (FAX CONTROLLER)

2) R96DFXL-CID (IC6) : pin-100 QFP (MODEM)

The FAXENGINE Integrated Facsimile Controllers.

FC100M, contains an internal 8 bit microprocessor with an external 2 Mbyte address space and dedicated circuitry optimized for facsimile image processing and facsimile machine control and monitoring.

3) 27C020 (IC4): pin-32 DIP (ROM)

EPROM of 2Mbit equipped with software for the main CPU.

4) W24258S-70LE (IC3): pin-28 SOP (SRAM)

Line memory for the main CPU system RAM area and coding/decoding process. Used as the transmission buffer.

Memory of recorded data such as daily report and auto dials. When the power is turned off, this memory is backed up by the lithium battery.

5) M514800C-70J (IC1): pin-28 SOJ (DRAM)

Image memory for recording process.

• Memory for recording pixel data without paper.

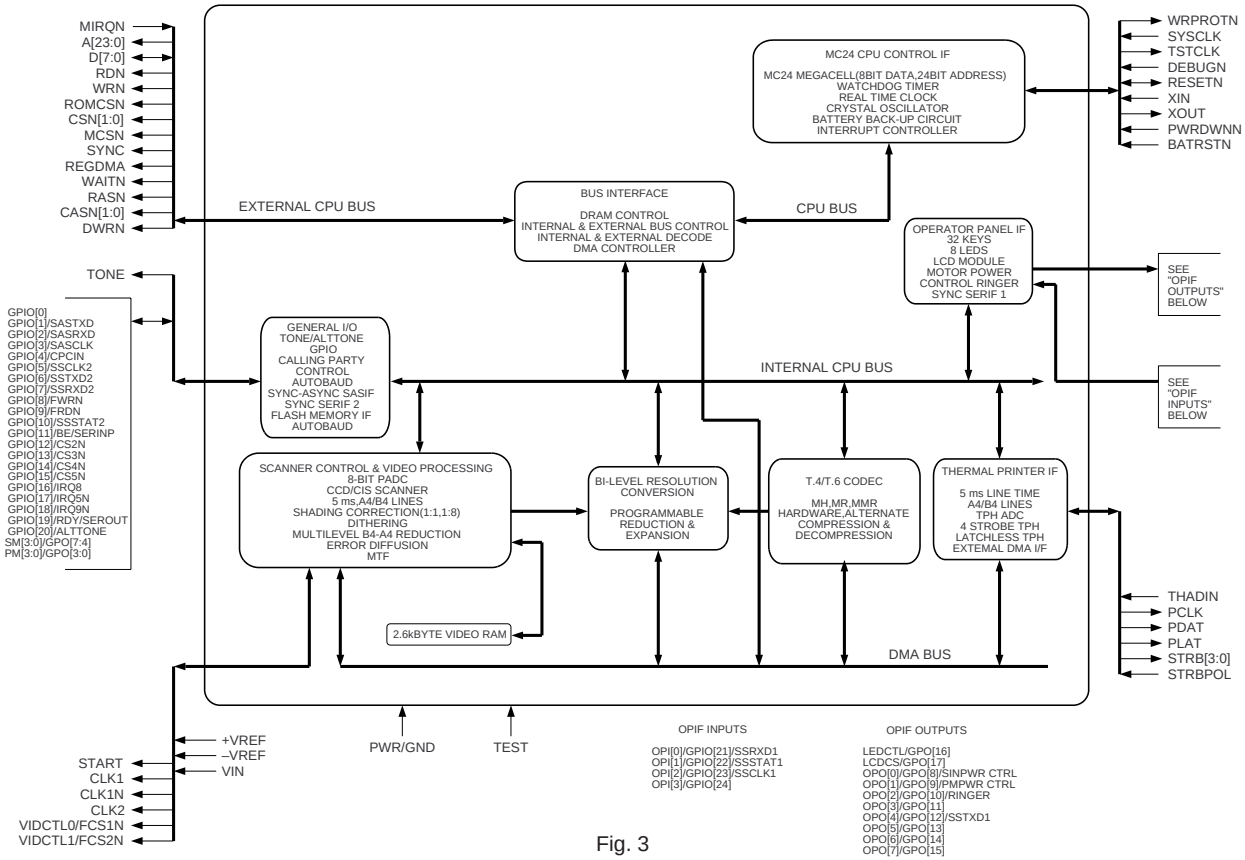


Fig. 3

FC100M (IC9) Terminal descriptions

Pin Name	Pin No.	I/O	Input Type	Output Type	Pin Description (Note: Active low signals have an "n" pin name ending.)
CPU Control Interface					
MIRQn	135	I	HU	–	Modem interrupt, active low. (Hysteresis In, Internal Pullup.)
SYSCLK	133	I	H	–	System clock. (Hysteresis In.)
TSTCLK	130	O	–	123XT	Test clock.
Bus Control Interface					
A[23:0]	[1:6][8:13] [15:20][22:27]	O	TU	123XT	Address bus (24-bit).
D[7:0]	[136:139] [141:144]	I/O	TU	123XT	Data bus (8-bit).
RDn	128	O	–	123XT	Read strobe.
WRn	127	O	–	123XT	Write strobe.
ROMCSn	120	O	–	123XT	ROM chip select.
CS1n	122	O	–	123XT	I/O chip select.
CS0n	57	O	–	123XT	SRAM chip select. (Battery powered.)
MCSn	121	O	–	123XT	Modem chip select.
SYNC	126	O	–	123XT	Indicates CPU op code fetch cycle (active high).
REGDMA	124	O	–	123XT	Indicates REGSEL cycle and DMA cycle.
WAITn	125	O	–	123XT	Indicates current TSTCLK cycle is a wait state or a halt state.
RASn	113	O	–	123XT	DRAM row address select. (Battery powered.)
CAS[1:0]n	[111:112]	O	–	123XT	DRAM column address select. (Battery powered.)
DWRn	109	O	–	123XT	DRAM write. (Battery powered.)
Prime Power Reset Logic and Test					
DEBUGn	129	I	HU	–	External non-maskable input (NMI).
RESETn	131	I/O	HU	2XO	FC100/FC200 Reset.
TEST	58	I	C	–	Sets Test mode (Battery powered).
Battery Power Control and Reset Logic					
XIN	59	I	OSC	–	Crystal oscillator input pin.
XOUT	60	O	–	OSC	Crystal oscillator output pin.
PWRDWNn	62	I	H	–	Used by external system to indicate -to FC100/FC200 - loss of prime power. (Results in NMI)
BATRSTn	61	I	H	–	Battery power reset input.
WRPROTn	110	O	–	1XC	(Battery powered.) Write protect during loss of VDD power. NOTE:The functional logic is powered by battery power, but the output drive is powered by DRAM battery power.
Scanner Interface					
START	101	O	–	2XS	Scanner shift gate control.
CLK1	100	O	–	2XS	Scanner clock.
CLK1n	99	O	–	2XS	Scanner clock-inverted.
CLK2	98	O	–	2XS	Scanner reset gate control (or clock for CIS scanner).
FCS1n/VIDCTL0	96	O	–	2XT	Flash memory chip select or Video Control signal.
FCS2n/VIDCTL1	97	O	–	2XT	Flash memory chip select or Video Control signal.
Printer Interface					
PCLK/DMAACK	29	O	–	3XC	Thermal Print Head (TPH) clock, or external DMAACK.
PDAT	30	O	–	2XP	Serial printing data (to TPH).
PLAT	31	O	–	3XP	TPH data latch.
STRB[3:0]	[33:36]	O	–	1XP	Strobe signals for the TPH.
STRBPOL/DMAREQ	37	I	C	–	Sets strobe polarity, active high/low or external DMA request.
Operator Panel Interface					
OPO[0]/GPO[8]/ SMPWRCTRL	47	O	–	2XL	Keyboard/LED strobe [0] or GPO[8] or Scan Motor Power Control
OPO[1]/GPO[9]/ PMPWRCTRL	46	O	–	2XL	Keyboard/LED strobe [1] or GPO[9] or Print Motor Power Control
OPO[2]/GPO[10]/ RINGER	44	O	–	2XCT	Keyboard/LED strobe [2] or GPO[10] or RINGER
OPO[3]/GPO[11]	43	O	–	2XL	Keyboard/LED strobe [3] or GPO[11]
OPO[4]/GPO[12]/ SSTXD1	42	O	–	2XL	Keyboard/LED strobe [4] or GPO[12] or SSTXD1 (for SSIF1)
OPO[5]/GPO[13]	40	O	–	2XL	Keyboard/LED strobe [5] or GPO[13]
OPO[6]/GPO[14]	39	O	–	2XL	Keyboard/LED strobe [6] or GPO[14]
OPO[7]/GPO[15]	38	O	–	2XL	Keyboard/LED strobe [7] or GPO[15]
OPI[0]/GPIO[21]/ SSRXD1	52	I/O	HU	2XC	(Pullup, Hysteresis In) Keyboard return [0] or GPIO[21] or SSRXD1 (for SSIF1)
OPI[1]/GPIO[22]/ SSSTAT1	51	I/O	HU	2XC	(Pullup, Hysteresis In) Keyboard return [1] or GPIO[22] or SSSTAT1 (for SSIF1)

FC100M (IC9) Terminal descriptions

Pin Name	Pin No.	I/O	Input Type	Output Type	Pin Description
Operator Panel Interface					
OPI[2]/GPIO[23]/ SSCLK1	50	I/O	HU	2XC	(Pullup, Hysteresis In) Keyboard return [2] or GPIO[23] or SSCLK1 (for SSIF1)
OPI[3]/GPIO[24]	49	I/O	HU	2XC	(Pullup, Hysteresis In) Keyboard return [3] or GPIO[24]
LEDCTL	55	O	–	4XC	Indicates outputs OPO[7:0] are for LEDs.
LCDCS	54	O	–	1XC	LCD chip select.
General Purpose I/O					
GPIO[0]	94	I/O	H	2XC	(Hysteresis In) GPIO[0].
GPIO[1]/SASTXD	93	I/O	H	2XC	(Hysteresis In) GPIO[1] or SASTXD (for SERIF).
GPIO[2]/SASRXD	92	I/O	H	2XC	(Hysteresis In) GPIO[2] or SASRXD (for SERIF).
GPIO[3]/SASCLK	91	I/O	H	2XC	(Hysteresis In) GPIO[3] or SASCLK (for SERIF).
GPIO[4]/CPCIN	90	I/O	H	2XC	(Hysteresis In) GPIO[4] or Calling Party Control Input.
GPIO[5]/SSCLK2	89	I/O	H	2XC	(Hysteresis In) GPIO[5] or SSCLK2 (for SSIF2).
GPIO[6]/SSTXD2	87	I/O	H	2XC	(Hysteresis In) GPIO[6] or SSTXD2 (for SSIF2).
GPIO[7]/SSRXD2	86	I/O	H	2XC	(Hysteresis In) GPIO[7] or SSRXD2 (for SSIF2).
GPIO[8]/FWRn	85	I/O	H	2XC	(Hysteresis In) GPIO[8] or flash write enable signal for NAND-type flash memory.
GPIO[9]/FRDn	84	I/O	H	2XC	(Hysteresis In) GPIO[9] or flash read enable signal for NAND-type flash memory.
GPIO[10]/SSSTAT2	83	I/O	H	2XC	(Hysteresis In) GPIO[10] or SSSTAT2 (for SSIF2).
GPIO[11]/BE/ SERINP	82	I/O	H	1XC	(Hysteresis In) GPIO[11] or bus enable or serial port data input for autobaud detection.
GPIO[12]/CS[2]n	80	I/O	H	2XC	(Hysteresis In) GPIO[12] or I/O chip select [2].
GPIO[13]/CS[3]n	79	I/O	H	2XC	(Hysteresis In) GPIO[13] or I/O chip select [3].
GPIO[14]/CS[4]n	78	I/O	H	2XC	(Hysteresis In) GPIO[14] or I/O chip select [4].
GPIO[15]/CS[5]n	77	I/O	H	2XC	(Hysteresis In) GPIO[15] or I/O chip select [5].
GPIO[16]/IRQ[8]	76	I/O	H	1XC	(Hysteresis In) GPIO[16] or external interrupt 8.
GPIO[17]/IRQ[5]n	75	I/O	H	1XC	(Hysteresis In) GPIO[17] or external interrupt 5.
GPIO[18]/IRQ[9]n	74	I/O	H	1XC	(Hysteresis In) GPIO[18] or external interrupt 9.
GPIO[19]/RDY/ SEROUT	73	I/O	H	1XC	(Hysteresis In) GPIO[19] or ready signal or Serial port data output for autobaud detection.
GPIO[20]/ALTTONE	107	I/O	H	1XC	(Hysteresis In) GPIO[20] or ALTTONE.
Miscellaneous					
SM[3:0]/GPO[7:4]	[103:106]	O	–	1XC	Programmable: scan motor control pins or GPO pins.
PM[3:0]/GPO[3:0]	[115:118]	O	–	1XC	Programmable: print motor control pins or GPO pins.
TONE	119	O	–	1XC	Tone output signal.
Power, Reference Voltages, Ground					
-Vref/CLREF	66	I	-VR	–	Negative Reference Voltage for Video A/D or Reference Voltage for the Clamp Circuit.
ADXG	68	I	VXG	–	A/D Internal GND. (NOTE: This pin requires an external 0.22µF decoupling capacitor to ADGA.)
ADGA	69		VADG		A/D Analog Ground
ADVA	70		VADV		A/D Analog Power
ADGD	72		VADG		A/D Digital Ground
+Vref	71	I	+VR		Positive Reference Voltage for Video A/D.
VIN	67	I	VA	–	Analog Video A/D input.
THADI	65	I	TA	–	Analog Thermal A/D input.
Power and Ground					
VSS(12)	7,21,28,45, 53,56,64,88, 95,108,132, 134				Digital Ground
VDD(8)	14,32,41,48, 81,102,123, 140				Digital Power
VBAT	63				Battery Power
VDRAM	114				DRAM Battery Power

(2) Panel control block

The following controls are performed by the FC100M.

- Operation panel key scanning
- Operation panel LCD display

(3) Mechanism/recording control block

- Recording control block diagram (1)

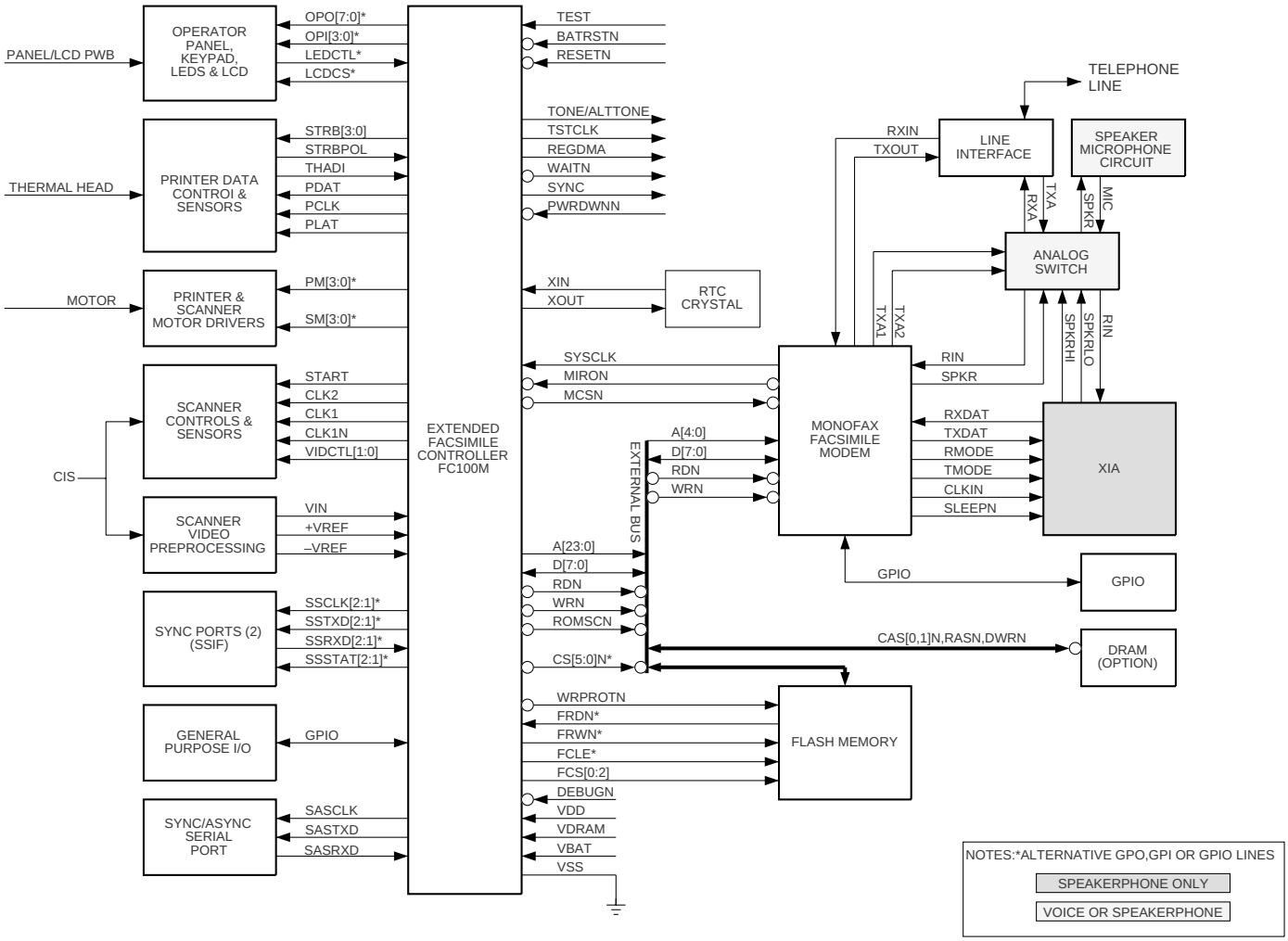


Fig. 4

(4) Modem (R96DFXL-CID) block

INTRODUCTION

The ROCKWELL(CONEXANT) R96DFXL-CID MONOFAX modem is a synchronous 9600 bits per second (bps) half-duplex modem with error detection and DTMF reception. It has low power consumption and requires only a single +5V DC power supply. The modem is housed in a single VLSI device package.
The modem can operate over the public switched telephone network (PSTN) through line terminations provided by a data access arrangement (DAA).
The R96DFXL-CID is designed for use in Group 3 facsimile ma-chines. The modem satisfies the requirements specified in CCITT recommendations V.29, V.27 ter, V.21 Channel 2 and T.4, and meets the binary signaling requirements of T.30.
The modem can operate at 9600, 7200, 4800, 2400, or 300 bps, and also includes the V.27 ter short training sequence option.
The modem can also perform HDLC framing according to T.30 at 9600, 7200, 4800, 2400, or 300 bps.
The modem features a programmable DTMF receiver and three programmable tone detectors which operate concurrently with the V.21 channel 2 receiver.
The voice mode allows the host computer to efficiently transmit and receive audio signals and messages.
The modem is available in either a 100-pin plastic quad flat pack (PQFP) or a 64-pin quad in-line package (QUIP).
General purpose input/output (GPIO) pins are available for host as signment in the 100-pin PQFP.
The modem's small size, single voltage supply, and low power consumption allow the design of compact system enclosures for use in both office and home environments.
MONOFAX is a registered trademark of ROCKWELL(CONEXANT) International.

FEATURES

- Group 3 facsimile transmission/reception
  - – ITU-TS V.29, V.27 ter, T.30, V.21 Channel 2, T.4
  - – HDLC Framing at all speeds
- V.27 ter short train
- Concurrent DTMF, FSK, and tone reception
- Voice mode transmission/reception
- Half-duplex (2-wire)
- Programmable maximum transmit level:
  - 0 dBm to –15 dBm
- Programmable transmit analog attenuation:
  - 0 dB to 14 dB in 2 dB steps
- Receive dynamic range: 0 dBm to –43 dBm
- Programmable dual tone generation
- Programmable tone detection
- Programmable turn-on and turn-off thresholds
- Programmable interface memory interrupt
- Diagnostic capability
  - – Allows telephone line quality monitoring
- Equalization
  - – Automatic adaptive equalizer
  - – Fixed digital compromise equalizer
- DTE interface: two alternate ports
  - – Selectable microprocessor bus (6500 or 8085)
  - – CCITT V.24 (EIA-232-D compatible) interface
- TTL and CMOS compatible
- Low power consumption: 275 mW (typical)
- Single Package
  - – 100-pin PQFP
  - – 64-pin QUIP
- Single +5VDC power supply
- Software compatible with R96MFX, R96EFX, R96SHF, and R96VFX modems

R96DFXL-CID (IC6) Hardware Interface Signals

Pin Signals – 100-Pin PQFP

Pin No.	Signal Name	I/O Type
1	GP03	IA/OB
2	GP04	IA/OB
3	GP05	IA/OB
4	GP06	IA/OB
5	GP07	IA/OB
6	0VD2	GND
7	0VD2	GND
8	D7	IA/OB
9	D6	IA/OB
10	D5	IA/OB
11	D4	IA/OB
12	D3	IA/OB
13	D2	IA/OB
14	D1	IA/OB
15	D0	IA/OB
16	0VD2	GND
17	0VA	GND
18	RAMPIN	R
19	NC	
20	NC	
21	0VA	GND
22	+5VD2	PWR
23	0VD1	GND
24	SWGAINI	R
25	ECLKIN1	R
26	SYNCIN1	R
27	NC	
28	NC	
29	NC	
30	0VA	GND
31	NC	
32	NC	
33	NC	
34	DAIN	R
35	ADOUT	R
36	BYPASS	IC
37	RCVI	R
38	TXLOSS3	IC
39	TXLOSS2	IC
40	TXLOSS1	IC
41	NC	
42	NC	
43	0VA	GND
44	TXOUT	AA
45	RXIN	AB
46	+5VA	PWR
47	0VA	GND
48	AGD	R
49	AOUT	R
50	0VD1	GND
51	NC	
52	$\overline{\text{IRQ}}$	OC
53	$\overline{\text{WRITE}}$-R/$\overline{\text{W}}$	IA
54	$\overline{\text{CS}}$	IA
55	$\overline{\text{READ}}$-ϕ2	IA
56	RS4	IA
57	RS3	IA
58	RS2	IA
59	RS1	IA
60	RS0	IA
61	GP13	IA/OB
62	NC	
63	$\overline{\text{GP11}}$	IA/OB
64	$\overline{\text{RTS}}$	IA
65	$\overline{\text{EN85}}$	R
66	$\overline{\text{0VD2}}$	GND
67	$\overline{\text{PORI}}$	ID
68	XTLI	R
69	XTLO	R
70	XCLK	OD
71	YCLK	OD
72	+5VD1	PWR
73	DCLK1	R
74	SYNCIN2	R
75	GP16	IA/OB
76	GP17	IA/OB
77	$\overline{\text{0VD2}}$	GND
78	$\overline{\text{CTS}}$	OA
79	TXD	IA
80	0VD2	GND
81	0VD2	GND
82	DCLK	OA
83	EYESYNC	OA
84	EYECLKX	OA
85	EYECLK	OA
86	EYEX	OA
87	ADIN	R
88	DAOUT	R
89	0VD2	GND
90	EYEY	OA
91	GP21	IA/OB
92	0VD2	GND
93	GP20	IA/OB
94	GP19	IA/OB
95	$\overline{\text{RXD}}$	OA
96	$\overline{\text{RLSD}}$	OA
97	0VD2	GND
98	RCVO	R
99	SWGAINO	R
100	GP02	IA/OB

Notes:
1. NC = No connection; leave pin disconnected (open).
2. I/O Type: = Digital signals: see Table 9;
   Analog signals: see Table 10.
3. R = Required modem inter-connection; no connection to host equipment.

[3] Circuit description of TEL/LIU PWB (UX-370ES/SE/FO-780AT/ES)

(1) TEL/LIU block operational description

1) Block diagram

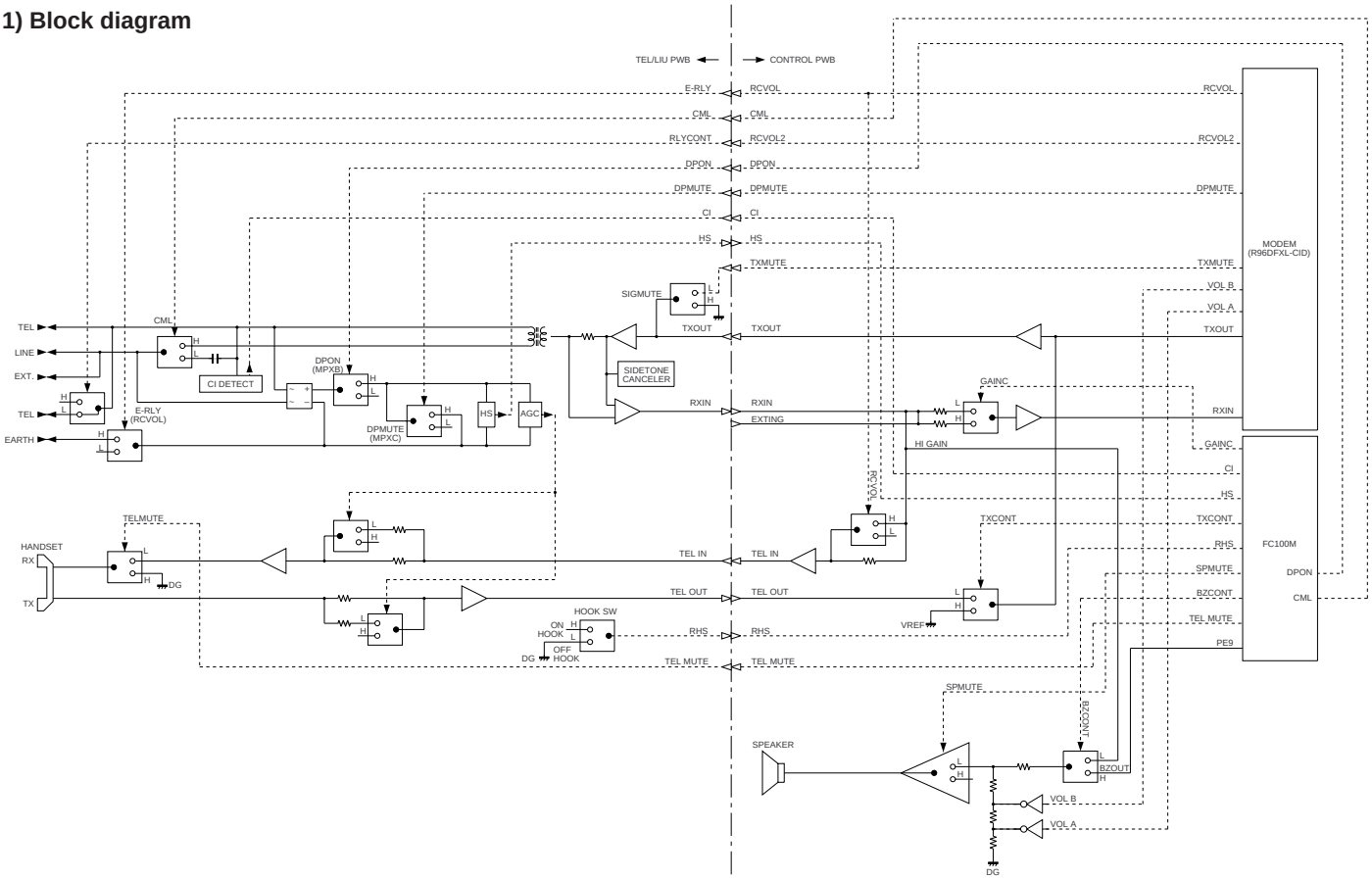


Fig. 5

2) Circuit description

The TEL/LIU PWB is composed of the following 10 blocks.

1. Surge protection circuit
2. Noise filter
3. Dial pulse generation circuit
4. CML relay
5. Matching transformer
6. Hybrid circuit
7. Signal selection
8. Sensor circuit
9. CI detection circuit
10. Power supply and bias circuit

3) Block description

1. Surge Protection circuit

This circuit protects the circuit from the surge voltage occurring on the telephone line.

- The AR1, AR2 protects the circuit from the 425V or higher line surge voltages.

2. Noise filter

The noise filter comprises the RF choke coil, L6, L7 and L8.

3. Dial pulse generation circuit

The pulse dial generation circuit comprises the photo-coupler PC2, PC3, polarity guard REC1, and resistor R1.

The photo-coupler PC3 shunts the line current using the DP signal before transmitting the dial signal, then turns off the CML relay.

After the pulse dial signal is transmitted by turning on/off the DP signal, the CML relay is turned on again.

4. CML relay

The CML relay switches over connection to the matching transformer T1 while the FAX or built-in telephone is being used.

5. Matching transformer

The matching transformer performs electrical insulation from the telephone line and impedance matching for transmitting the TEL/FAX signal.

6. Hybrid circuit

The hybrid circuit performs 2-wire-to-4-wire conversion using the IC102 of operational amplifier, transmits the voice transmission signal to the line, and feeds back the voice signal to the voice reception circuit as the side tone.

7. Signal selection

The following signals are used to control the transmission line of TEL/LIU signal. For details, refer to the signal selector matrix table.

8. Sensor circuit

For the recording paper sensor ($\overline{PE}$), when there is recording paper, the photo transistor in the light receiving side is ON and the detection level is LOW. When there is no recording paper, the photo transistor in the light receiving side is OFF and the detection level is HIGH.

9. CI detection circuit

The CI detection circuit detects the CI signals. A CI signal, which is provided to the photo-coupler PC6 through the ES:C3 (0.47 μF), R3 (51 K)/ SE:C3 (0.56 μF), R3 (22 K)/AT:C3 (1.0 μF), R3 (15 K), and ZD2 when the ring signal is inputted from the telephone line.

10. Power supply and bias circuits

The voltages of +5V and +24VA are supplied from the control PWB unit.

[Control signals from output port]

<table>
<tr><th>Signal Name</th><th>Description</th></tr>
<tr><td>CML
(The circuit is located in the TEL/LIU PWB.)</td><td>Line connecting relay and DP generating relay
H: Line make
L: Line break</td></tr>
<tr><td>SP MUTE</td><td>Speaker tone mute control signal
H: Muting (Power down mode)
L: Muting cancel (Normal operation)</td></tr>
<tr><td>TEL MUTE</td><td>Handset reception mute control signal
H: Muting
L: Muting cancel</td></tr>
<tr><td>VOL A
VOL B

(The circuit is located in the control PWB.)</td><td>Speaker volume control signal,
VOL A VOL B matrix
<table>
<tr><th></th><th>VOL A</th><th>VOL B</th><th>RING. Receiving</th><th>Buzzer</th><th>DTMF</th></tr>
<tr><td></td><td>H</td><td>H</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td></td><td>L</td><td>H</td><td>Low</td><td>—</td><td>Low</td></tr>
<tr><td></td><td>H</td><td>L</td><td>Middle</td><td>Fixed</td><td>Middle</td></tr>
<tr><td></td><td>L</td><td>L</td><td>High</td><td>—</td><td>High</td></tr>
</table></td></tr>
<tr><td>TXCONT
(The circuit is located in the control PWB.)</td><td>Handset transfer mute control signal
H: Signal sending, when transmitting
L: During reception, transmission mute, (during standby)</td></tr>
<tr><td>GAIN-C
(The circuit is located in the control PWB.)</td><td>Reception gain switching signal
H: When connected to line, 1: 1 gain
L: When not connected to line, HIGH gain</td></tr>
<tr><td>BZCONT
(The circuit is located in the control PWB.)</td><td>Speaker output signal switching
H: Buzzer signal output (during stand by)
L: When monitoring line signal</td></tr>
</table>

[Signals for status recognition according to input signals]

Signal Name	Function
$\overline{\text{RHS}}$	H: The handset is in the on-hook state. L: The handset is in the off-hook state.
CI	Incoming call (CI) detection signal
P-E	H: Recording paper does not exist. L: Recording paper is set (exists). (Detection of recording paper in printing state)
P-IN	H: Recording paper does not exist in case of printing. L: Recording paper exists in case of printing. (Detection of recording paper in printing state)

[Other signals]

Signal Name	Function
TEL IN	Receiving signal from line or modem
TEL OUT	Transfer signal to line
TXOUT	Transmission (DTMF) analog signal output from modem
RXIN	Reception (DTMF, others) analog signal input into modem

NO	Signal Name (CNLIUA)	NO	Signal Name (CNLIUA)
1	TELOUT	8	RHS
2	TELIN	9	RXIN
3	TELMUTE	10	TXOUT
4	CI/CIDIN1	11	CML
5	CIDIN2/HS	12	+5V
6	P-E	13	DG
7	P-IN	14	+24VA

NO	Signal Name (CNLIUB)	NO	Signal Name (CNLIUB)
1	EXTSIG	4	DPON
2	RLYCNT	5	DPMUTE
3	SIGMUTE/TXMUTE	6	RCVOL

(Example: TEL speaking)

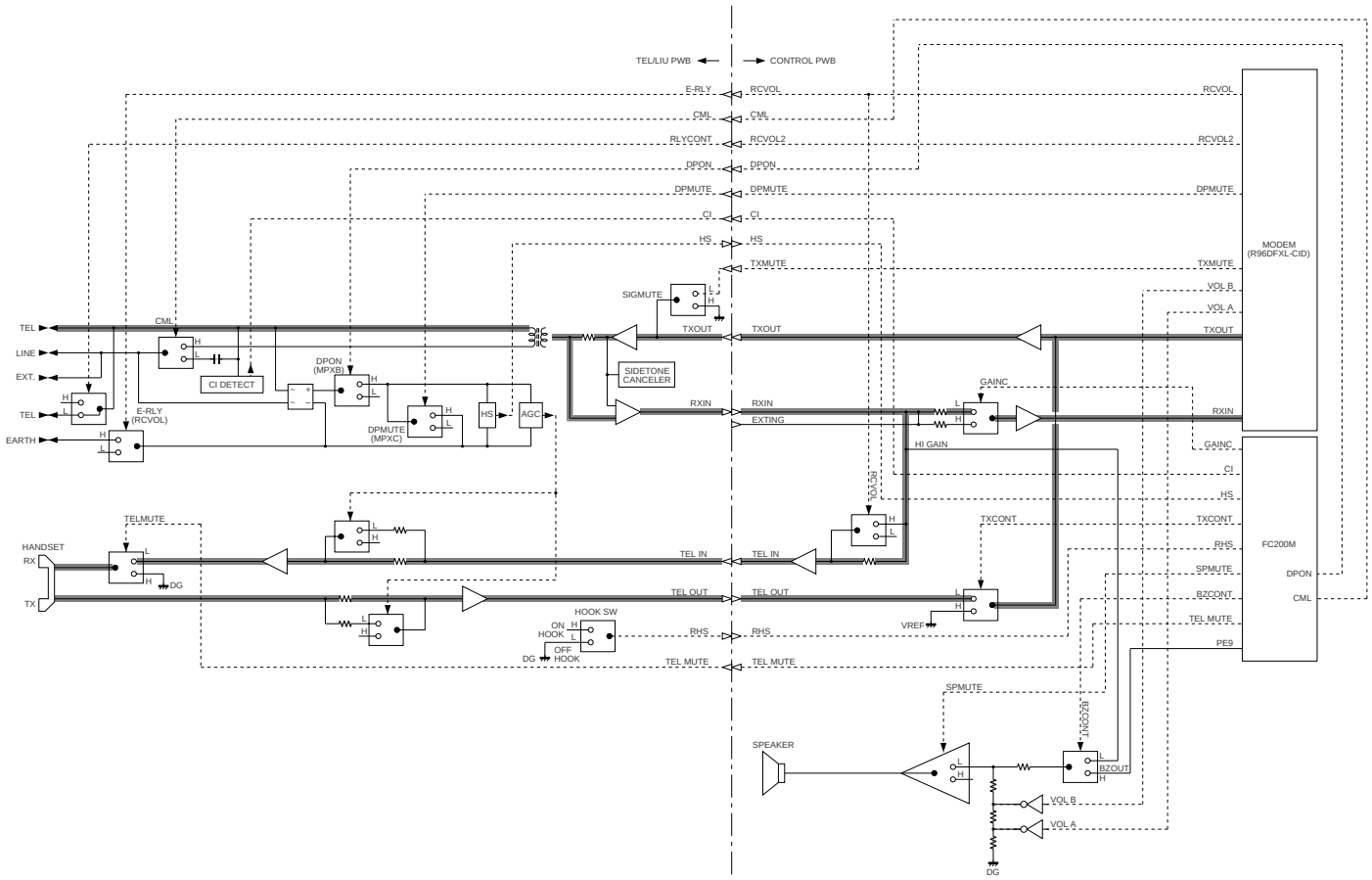


Fig. 6

[3] Circuit description of TEL/LIU PWB (UX-370F)

(1) TEL/LIU block operational description

1) Block diagram

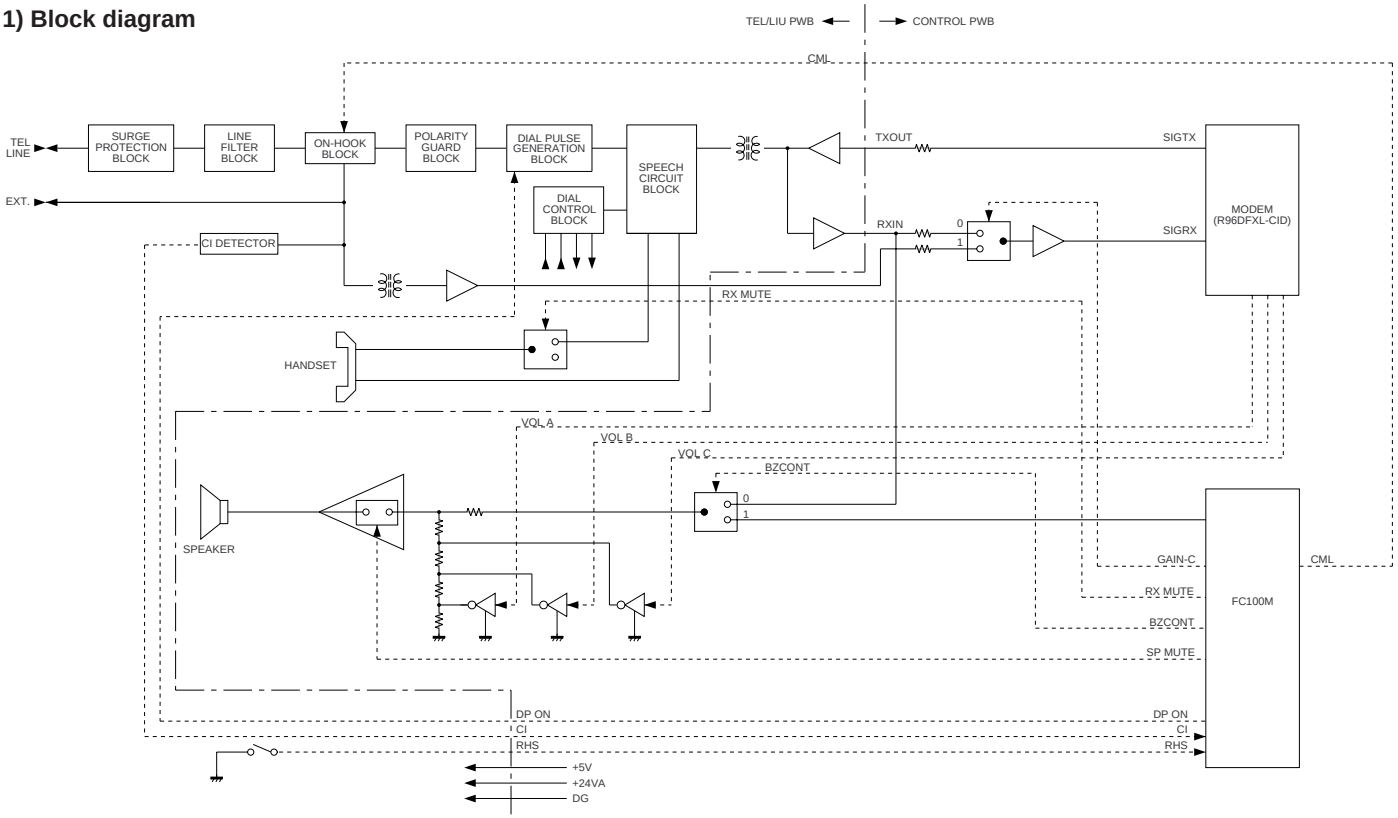


Fig. 5

2) Circuit description

The TEL/LIU PWB is composed of the following 10 blocks.

1. Surge protection circuit
2. Line filter block
3. Dial pulse generation circuit
4. On-hook circuit
5. Matching transformer
6. Hybrid circuit
7. Signal selection
8. Sensor circuit
9. Cl detection circuit
10. Power supply and bias circuit

3) Block description

1. Surge Protection circuit

This circuit protects the circuit from the surge voltage occurring on the telephone line.

- The AR1, AR2 protects the circuit from the 425V or higher line surge voltages.

2. Line filter block

This block is comprises of coil L2.

3. Dial pulse generation circuit

The pulse dial generation circuit comprises of transistor Q1, the photo-coupler PC5, PC9, and zener diode ZD8.

Dial pulses supplied from CPU are amplified by transistor Q1 through a photo-coupler PC9 to the telephone line.

4. On-hook circuit

This circuit comprises of CML relay and switch SW2, and CML and SW2 are for connection of the telephone line.

5. Matching transformer

The matching transformer performs electrical insulation from the telephone line and impedance matching for transmitting the TEL/FAX signal.

6. Hybrid circuit

The hybrid circuit performs 2-wire-to-4-wire conversion using the IC101 of operational amplifier, transmits the voice transmission signal to the line, and feeds back the voice signal to the voice reception circuit as the side tone.

7. Signal selection

The following signals are used to control the transmission line of TEL/LIU signal. For details, refer to the signal selector matrix table.

8. Sensor circuit

For the recording paper sensor (P-E, P-IN), when there is recording paper, the photo transistor in the light receiving side is ON and the detection level is LOW. When there is no recording paper, the photo transistor in the light receiving side is OFF and the detection level is HIGH.

9. CI detection circuit

The CI detection circuit detects the CI signals. A CI signal, which is provided to the photo-coupler PC10 through the C9 (0.68 μF), R4 (33 K), and ZD2 when the ring signal is inputted from the telephone line.

10. Power supply and bias circuits

The voltages of +5V and +24VA are supplied from the control PWB unit.

[Control signals from output port]

<table>
<tr><th>Signal Name</th><th>Description</th></tr>
<tr><td>CML
(The circuit is located in the TEL/LIU PWB.)</td><td>Line connecting relay and DP generating relay
H: Line make
L: Line break</td></tr>
<tr><td>SP MUTE</td><td>Speaker tone mute control signal
H: Muting (Power down mode)
L: Muting cancel (Normal operation)</td></tr>
<tr><td>RX MUTE</td><td>Handset reception mute control signal
H: Muting
L: Muting cancel</td></tr>
<tr><td>DP ON</td><td>DP generating relay
H : DP break
L : DP make</td></tr>
<tr><td>VOL A
VOL B
VOL C

(The circuit is located in the control PWB.)</td><td>Speaker volume control signal
VRSEL1 VRSEL2 matrix
<table>
<tr><th></th><th>VOL A</th><th>VOL B</th><th>VOL C</th><th>RING/ Receiving</th><th>Buzzer</th><th>DTMF</th></tr>
<tr><td></td><td>L</td><td>L</td><td>L</td><td>Low</td><td>—</td><td>Low</td></tr>
<tr><td></td><td>H</td><td>L</td><td>L</td><td>Middle</td><td>Fixed</td><td>Middle</td></tr>
<tr><td></td><td>L</td><td>L</td><td>H</td><td>High</td><td>—</td><td>High</td></tr>
</table></td></tr>
<tr><td>TXCONT
(The circuit is located in the control PWB.)</td><td>Handset transfer mute control signal
H: Signal sending, when transmitting
L: During reception, transmission mute, (during standby)</td></tr>
<tr><td>GAIN-C
(The circuit is located in the control PWB.)</td><td>Reception gain switching signal
H: When connected to line, 1: 1 gain
L: When not connected to line, HIGH gain</td></tr>
<tr><td>BZCONT
(The circuit is located in the control PWB.)</td><td>Speaker output signal switching
H: Buzzer signal output
L: When monitoring line signal</td></tr>
</table>

[Signals for status recognition according to input signals]

Signal Name	Function
$\overline{\text{RHS}}$	H: The handset is in the on-hook state. L: The handset is in the off-hook state.
CI	Incoming call (CI) detection signal
P-E	H: Recording paper does not exist. L: Recording paper is set (exists). (Detection of recording paper in printing state)
P-IN	H: Recording paper does not exist in case of printing. L: Recording paper exists in case of printing. (Detection of recording paper in printing state)

[Other signals]

Signal Name	Function
TXOUT	Transmission (DTMF) analog signal output from modem
RXIN	Reception (DTMF, others) analog signal input into modem

NO	Signal Name (CNLIUA)	NO	Signal Name (CNLIUA)
1	TELMUTE	7	RXIN
2	CI/CIDIN1	8	TXOUT
3	CIDIN2/HS	9	CML
4	P-E	10	+5V
5	P-IN	11	DG
6	RHS	12	+24VA

NO	Signal Name (CNLIUB)	NO	Signal Name (CNLIUB)
1	EXTSIG	4	DPON
2	RLYCNT	5	DPMUTE
3	SIGMUTE/TXMUTE	6	E-RLY

(Example: TEL speaking)

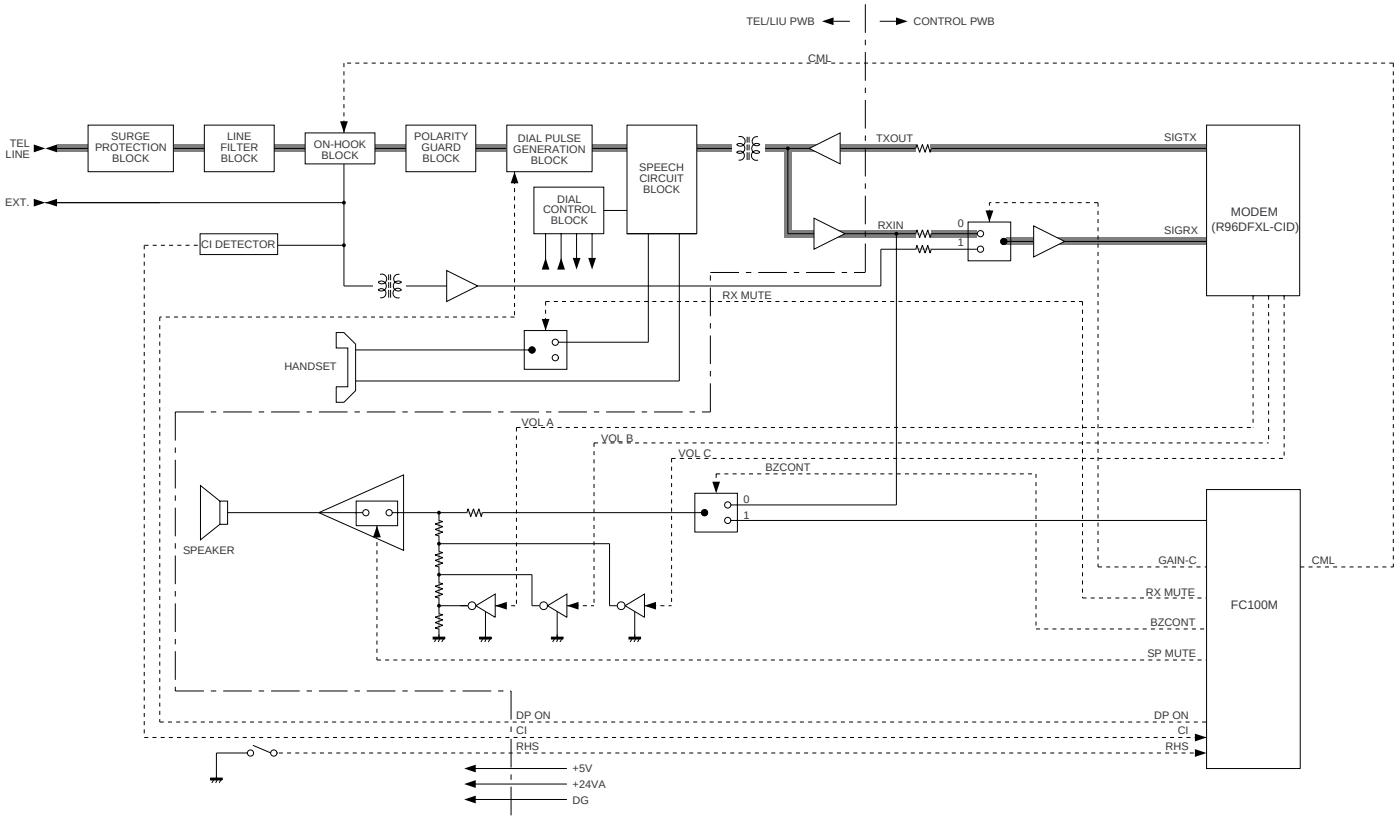


Fig. 6

[4] Circuit description of power supply PWB

1. Block diagram

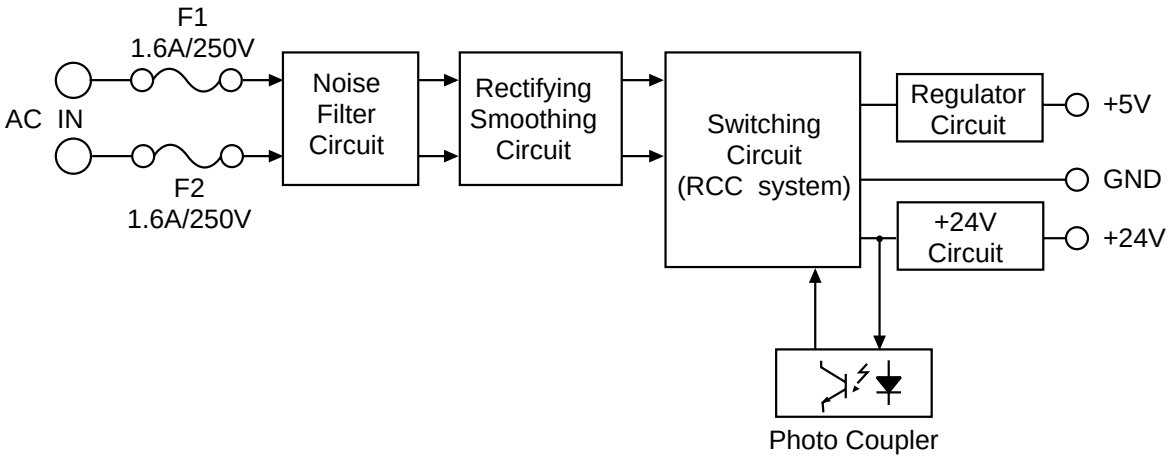


Fig. 7

2-1. Noise filter circuit

The input noise filter section is composed of L1, C1 and C15 that reduces normal mode noise from the AC line and common mode noise to the AC line.

2-2. Rectifying/smoothing circuit

The AC input voltage is rectified by diode D1, 2, 3, 4 and smoothed by capacitor C2 to supply DC voltage to switching circuit section.

Power thermistor TH1 suppresses inrush current at power switch-on.

2-3. Switching circuit

This circuit employs the self excited ringing choke convertor (RCC) system. In this system, the DC voltage supplied from the rectifying/smoothing section is converted to be the high frequency pulses by ON/OFF repetition of MOS FET Q1.

Energy is charged in the primary winding of T1 during ON period of Q1, and discharged to the secondary winding during OFF period of Q1.

The output voltage is controlled by adjusting ON period of Q1 which changes charge time of C8 through operation of photo-coupler PC1 from +24V output.

The overcurrent protection is performed by bringing Q1 to OFF state through detection of voltage increase in the auxiliary winding of T1 by ZD2, R5 and R6.

The overvoltage protection is performed by operating the overcurrent protection circuit through destruction of zener diode ZD4 and short-circuiting of load.

2-4. +5V circuit

Each DC voltage supplied by rectifying the output of transformer T1 with diode D8 is stabilized by 3-terminal regulator IC1.

[5] Circuit description of CIS unit

1. CIS

Cis is an image sensor which puts the original paper in close contact with the full-size sensor for scanning, being a monochromatic type with the pixel number of 1,728 dots and the main scanning density of 8 dots/mm.

It is composed of sensor, rod lens, LED light source, light-conductive plate, control circuit and so on, and the reading line and focus are previously adjusted as the unit.
Due to the full-size sensor, the focus distance is so short that the set is changed from the light weight type to the compact type.

2. Waveforms

The following clock is supplied from FC100M of the control board, and VO is output.

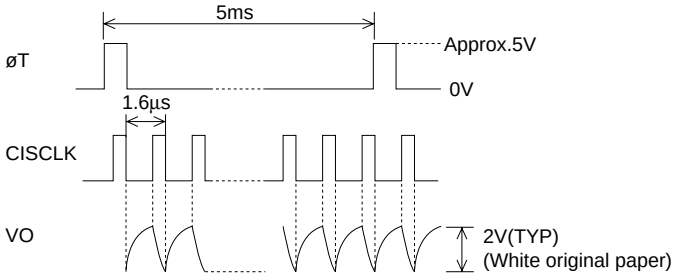
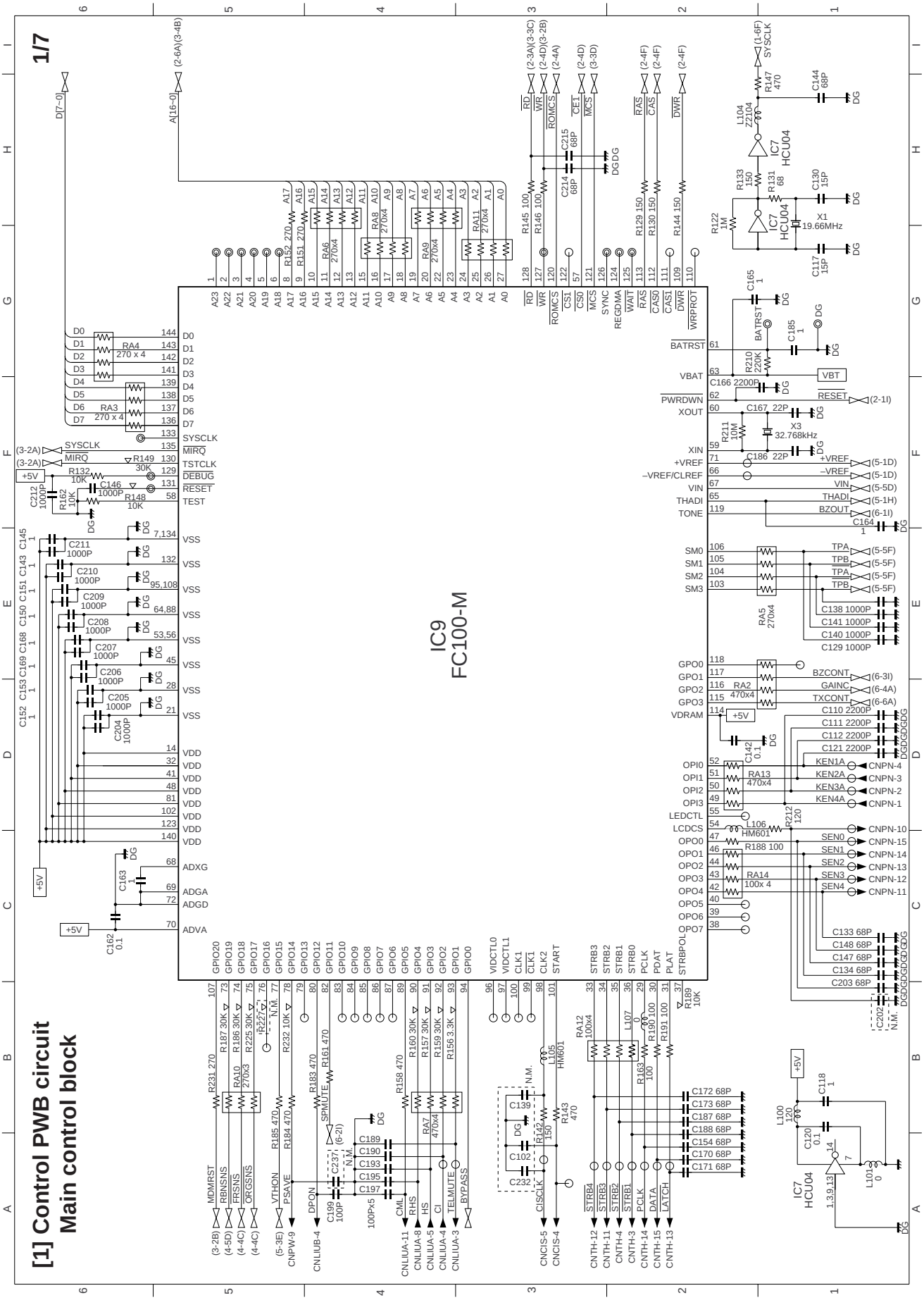
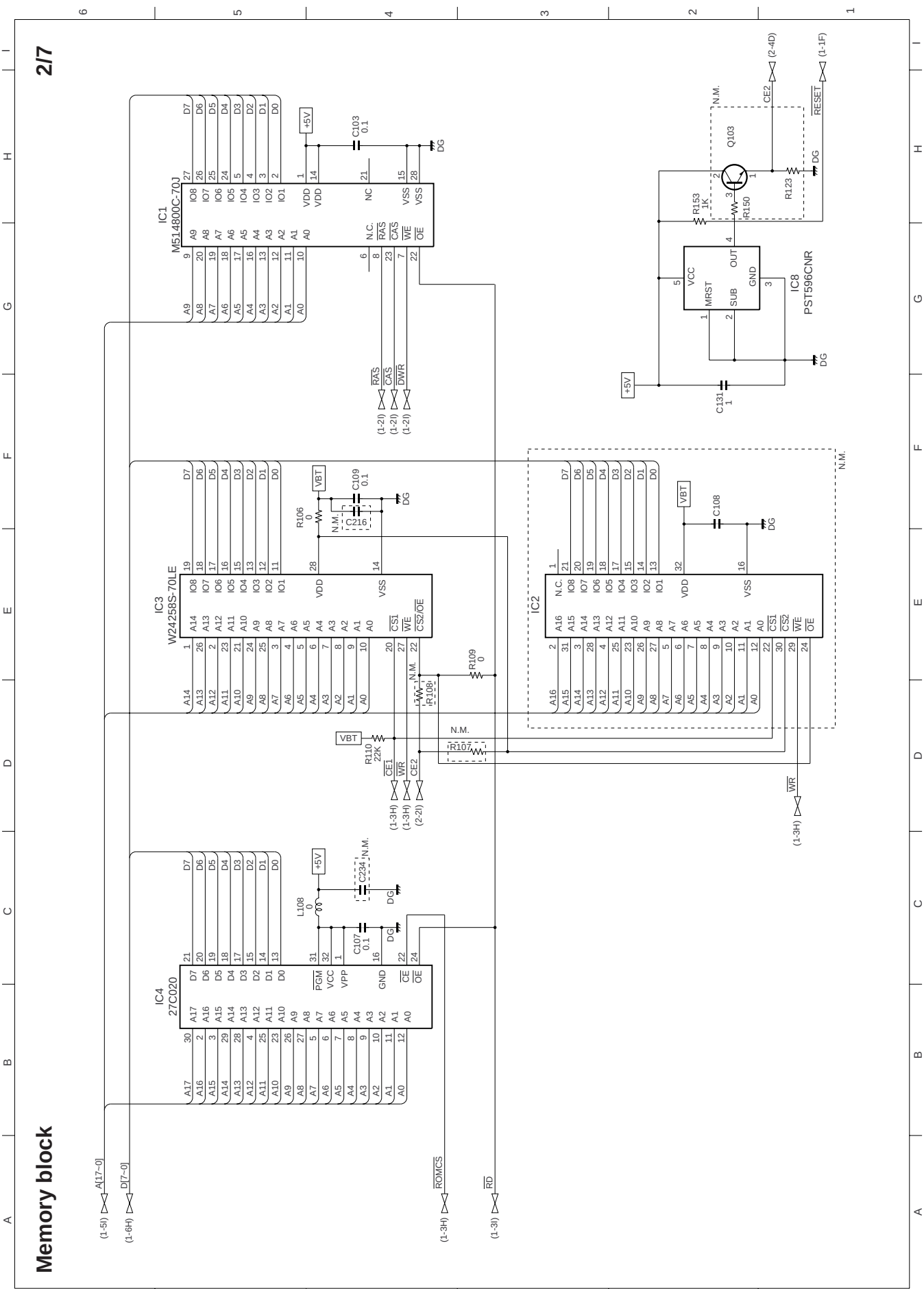


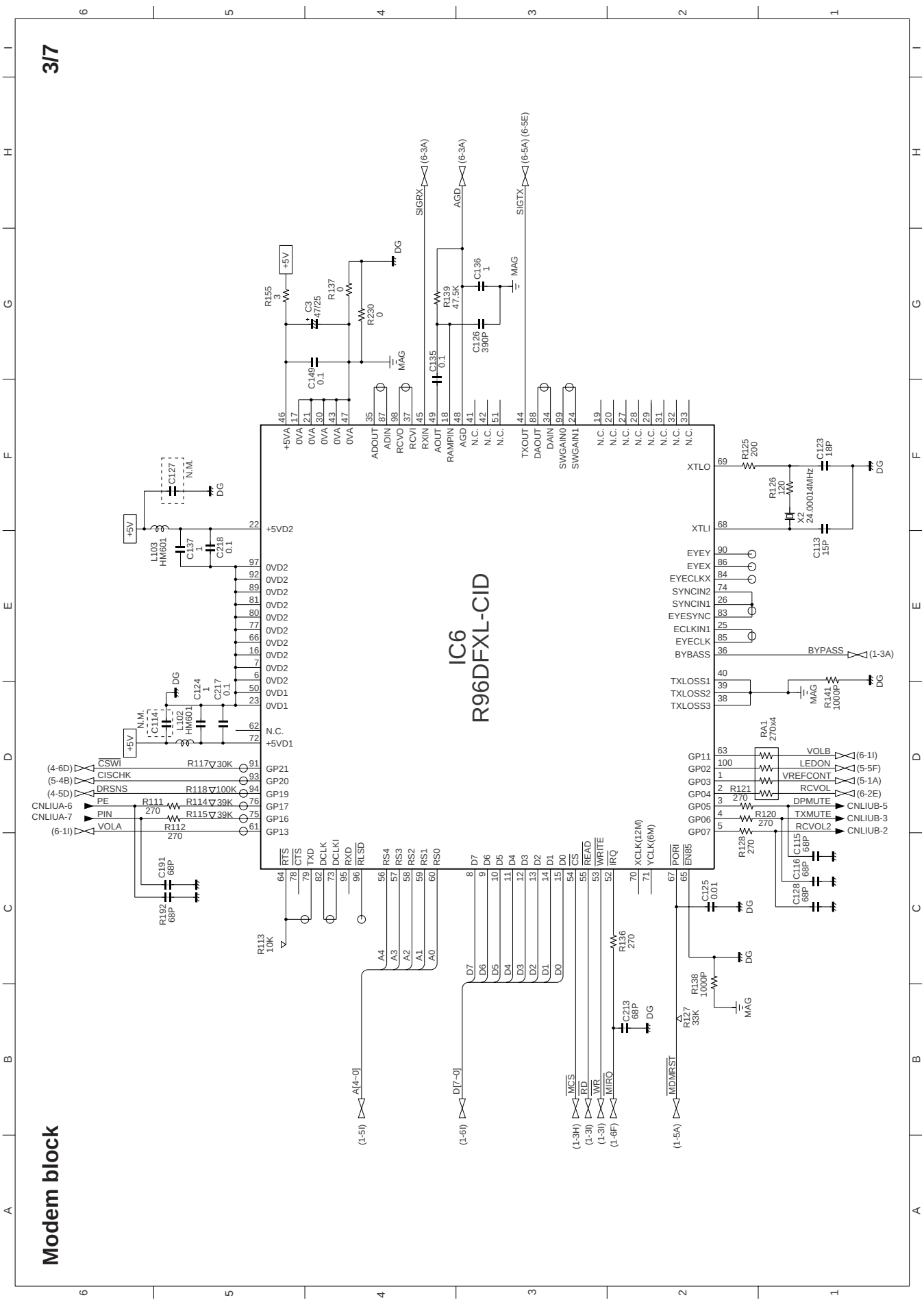
Fig. 8

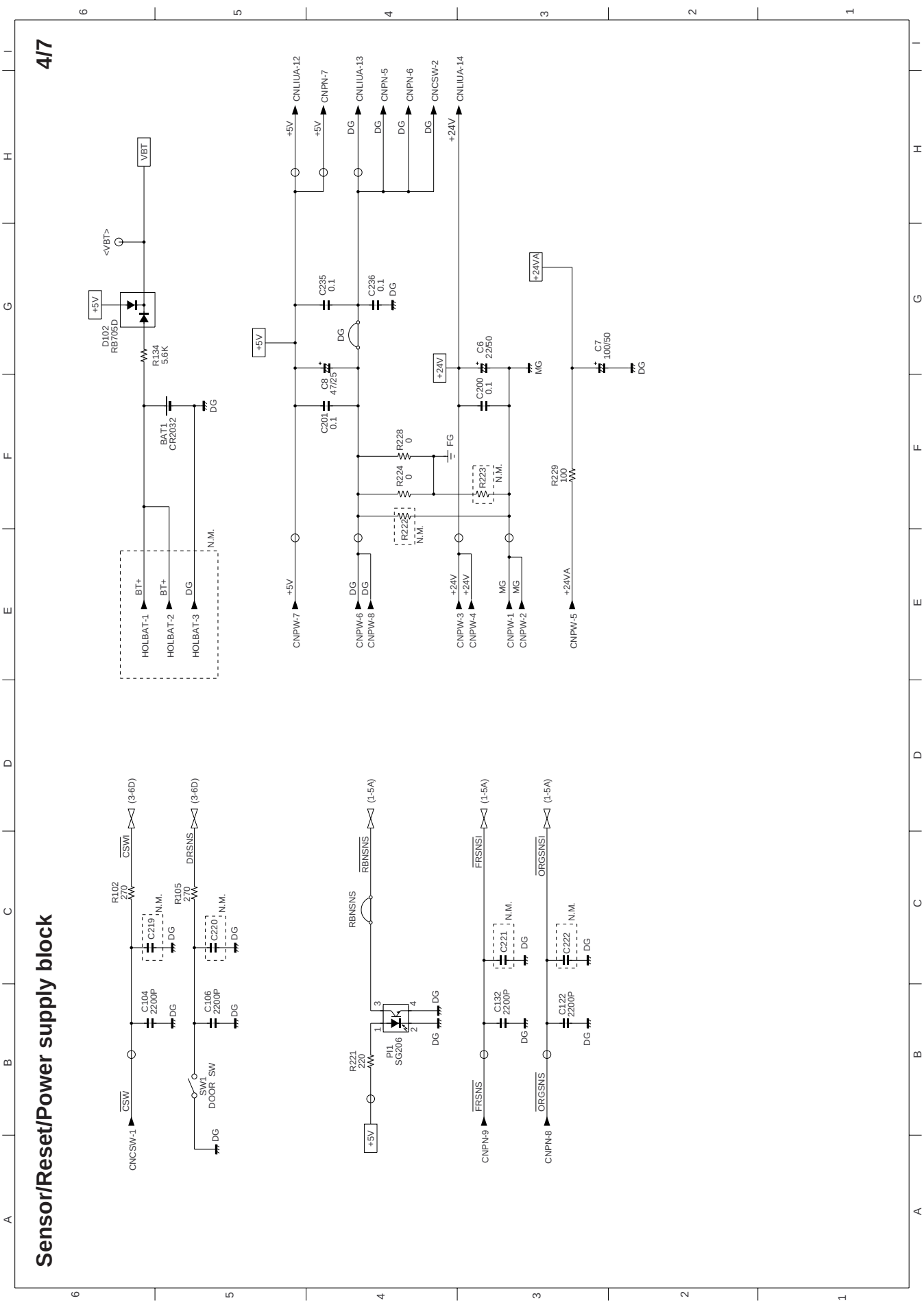
M E M O

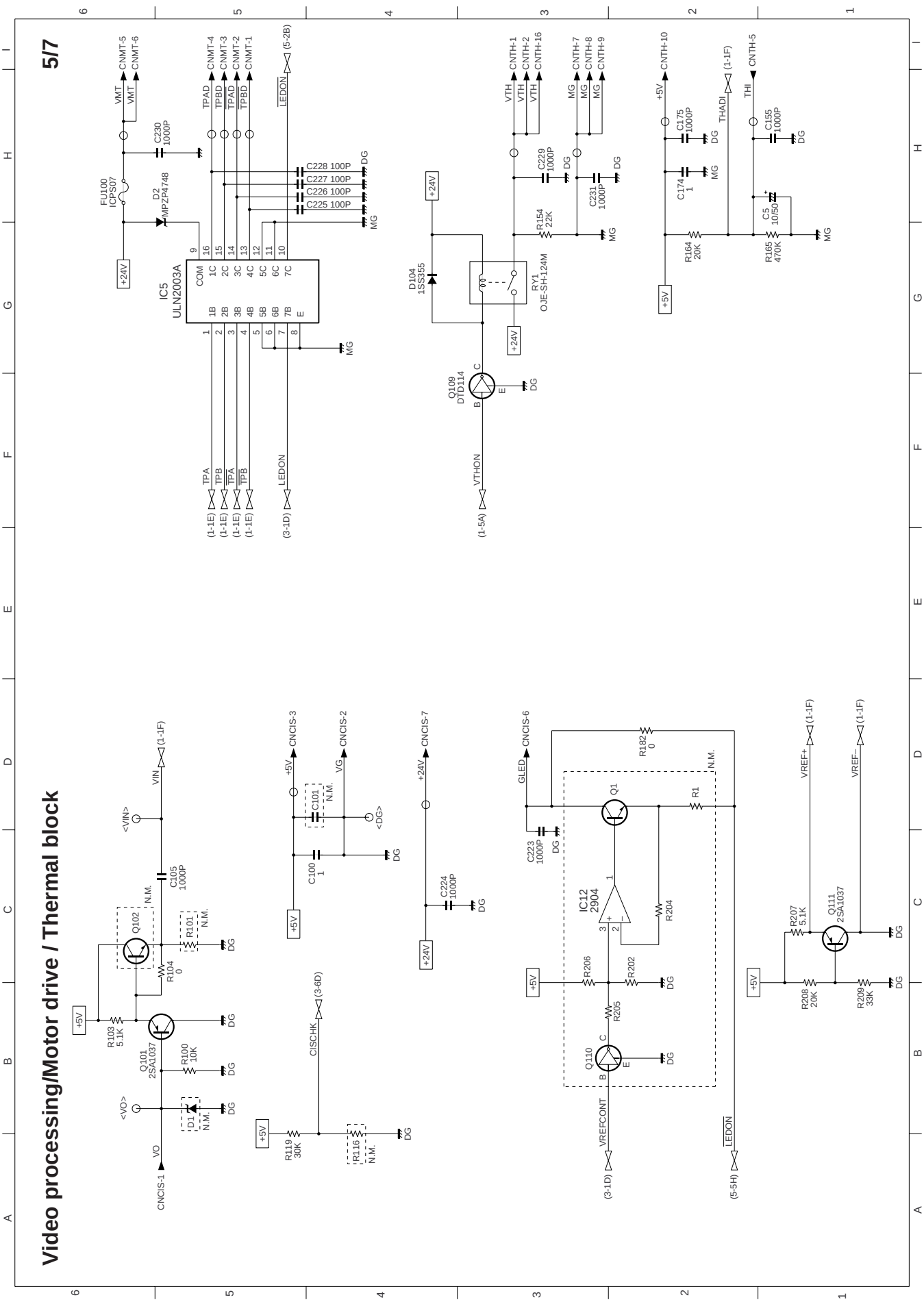
CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

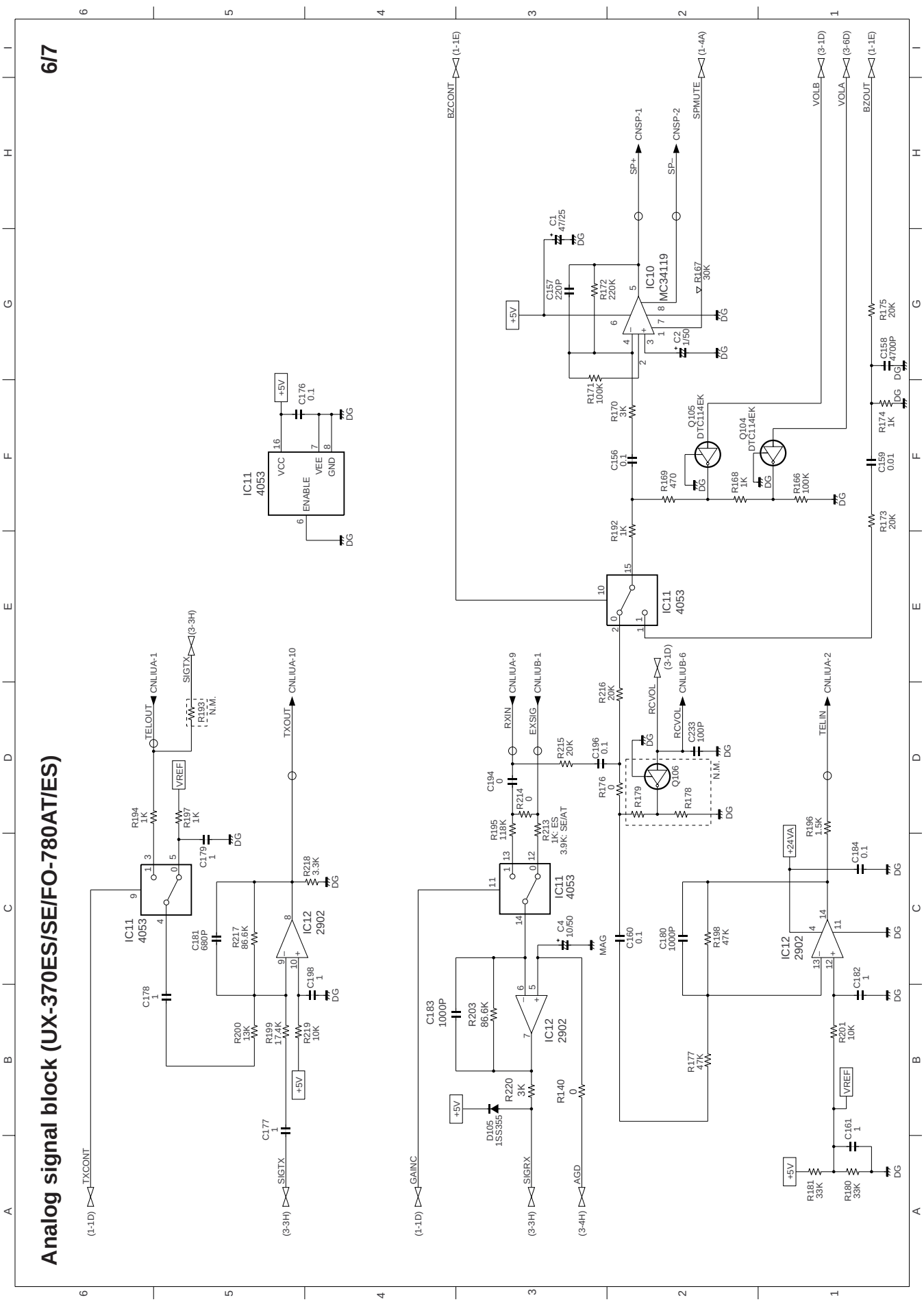


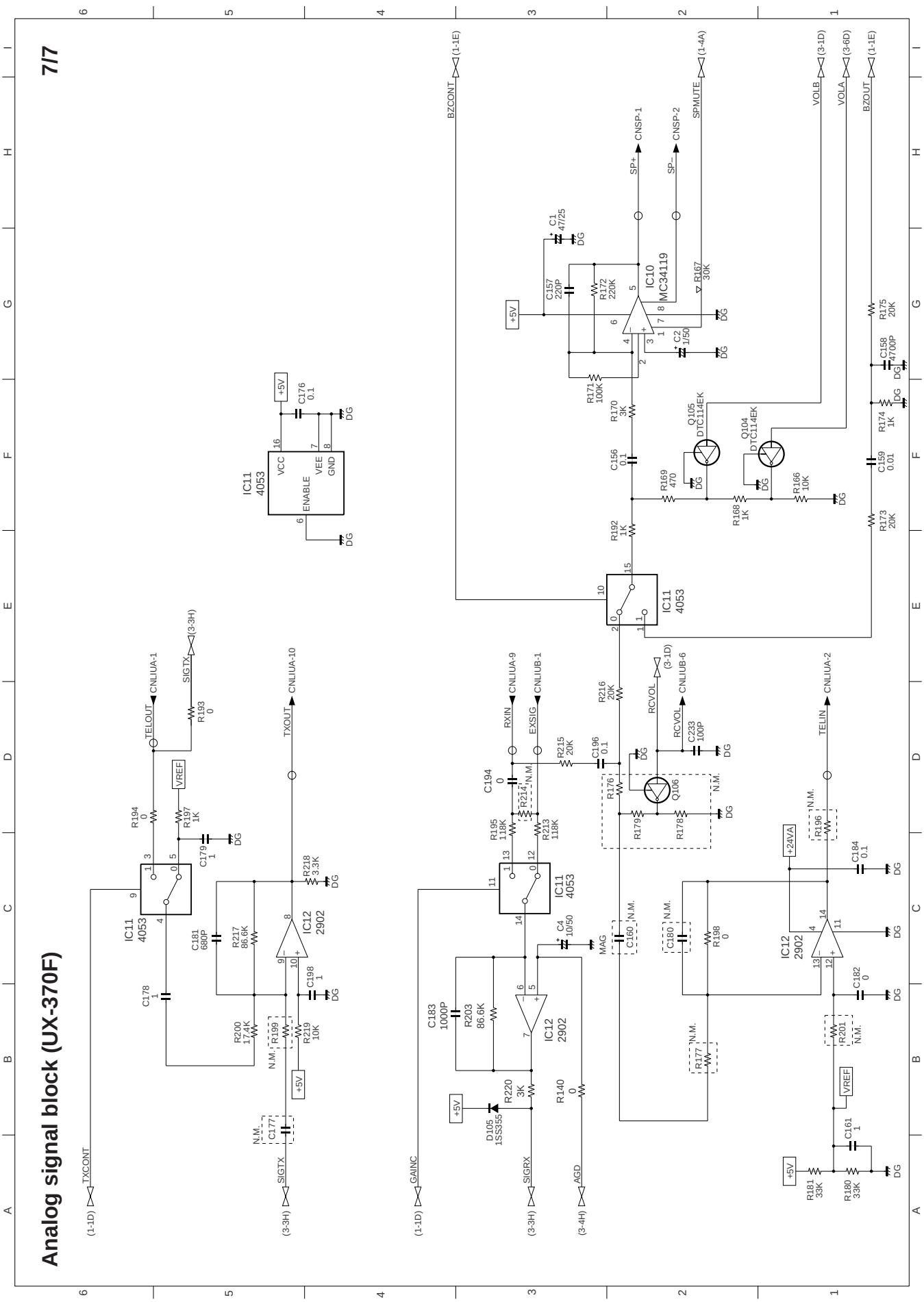

2/7
Memory block
IC1
M514800C-70J
IC2
IC3
W24258S-70LE
IC4
27C020
IC8
PST596CNR
Q103
N.M.
+5V
VBT
DG
C103 0.1
C109 0.1
C216
C108
C107 0.1
C234
C131 1
L108 0
R106 0
R109 0
R110 22K
R107
R153 1K
R150
R123
RESET
CE2
RAS
CAS
DWR
WR
CE1
ROMCS
RD
A[17~0]
D[7~0]


3/7
Modem block
IC6
R96DFXL-CID

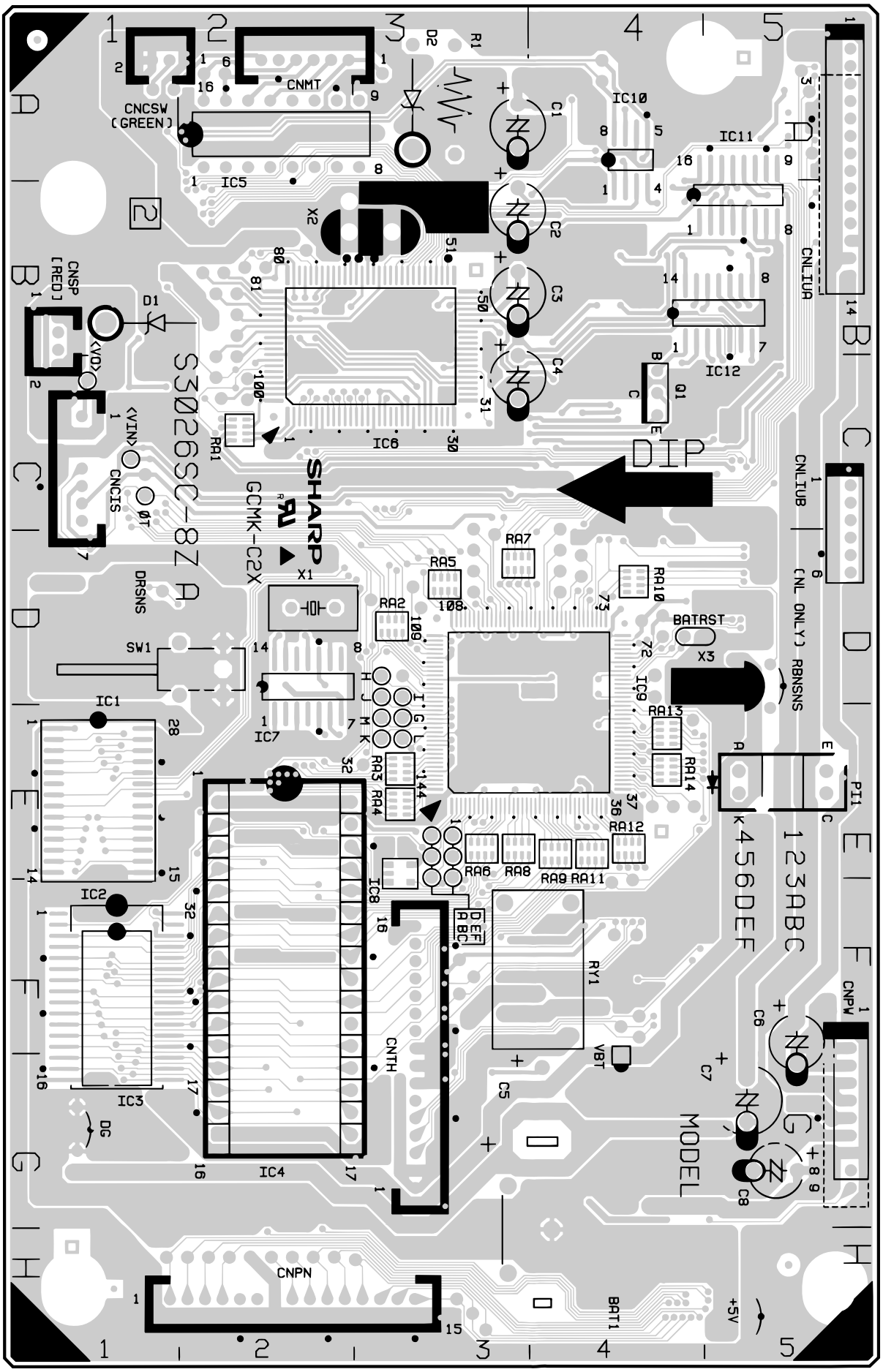

Sensor/Reset/Power supply block
4/7
VBT
<VBT>
+5V
D102
RB705D
R134
5.6K
BAT1
CR2032
DG
N.M.
HOLBAT-1
HOLBAT-2
HOLBAT-3
BT+
BT+
DG
CNPW-7
CNPW-6
CNPW-8
CNPW-3
CNPW-4
CNPW-1
CNPW-2
CNPW-5
CNLIUA-12
CNPN-7
CNLIUA-13
CNPN-5
CNPN-6
CNCSW-2
CNLIUA-14
+24V
+24VA
C235
0.1
C236
0.1
C8
47/25
C201
0.1
C200
0.1
C6
22/50
C7
100/50
R228
0
R224
0
R223
N.M.
R222
N.M.
R229
100
FG
MG
CNCSW-1
CSW
(3-6D)
R102
270
C104
2200P
C219
N.M.
SW1
DOOR SW
DRSNS
R105
270
C106
2200P
C220
N.M.
R221
220
PI1
SG206
RBNSNS
(1-5A)
CNPN-9
FRSNS
C132
2200P
C221
N.M.
CNPN-8
ORGSNS
C122
2200P
C222
N.M.


5/7
Video processing/Motor drive / Thermal block
IC5
ULN2003A
COM
1B
2B
3B
4B
5B
6B
7B
E
1C
2C
3C
4C
5C
6C
7C
FU100
ICPS07
D2
MPZ2P4748
C230
1000P
C228 100P
C227 100P
C226 100P
C225 100P
VMT
CNMT-5
CNMT-6
TPAD
TPBD
CNMT-4
CNMT-3
CNMT-2
CNMT-1
LEDON
(5-2B)
+24V
MG
DG
TPA
TPB
(1-1E)
LEDON
(3-1D)
D104
1SS355
RY1
OJE-SH-124M
Q109
DTD114
VTHON
(1-5A)
VTH
CNTH-1
CNTH-2
CNTH-16
MG
CNTH-7
CNTH-8
CNTH-9
C229
1000P
C231
1000P
R154
22K
+5V
CNTH-10
C175
1000P
C174
1
R164
20K
THADI
(1-1F)
THI
CNTH-5
C155
1000P
C5
10/50
R165
470K
<VIN>
VIN
C105
1000P
Q102
N.M.
R101
R104
0
R103
5.1K
Q101
2SA1037
R100
10K
<VO>
D1
VO
CNCIS-1
CNCIS-3
C101
C100
1
VG
CNCIS-2
<DG>
CISCHK
(3-6D)
R119
30K
R116
CNCIS-7
C224
1000P
GLED
CNCIS-6
R182
0
Q1
R1
C223
1000P
IC12
2904
R204
R206
R202
R205
Q110
VREFCONT
LEDON
(5-5H)
VREF+
VREF-
R207
5.1K
Q111
2SA1037
R208
20K
R209
33K

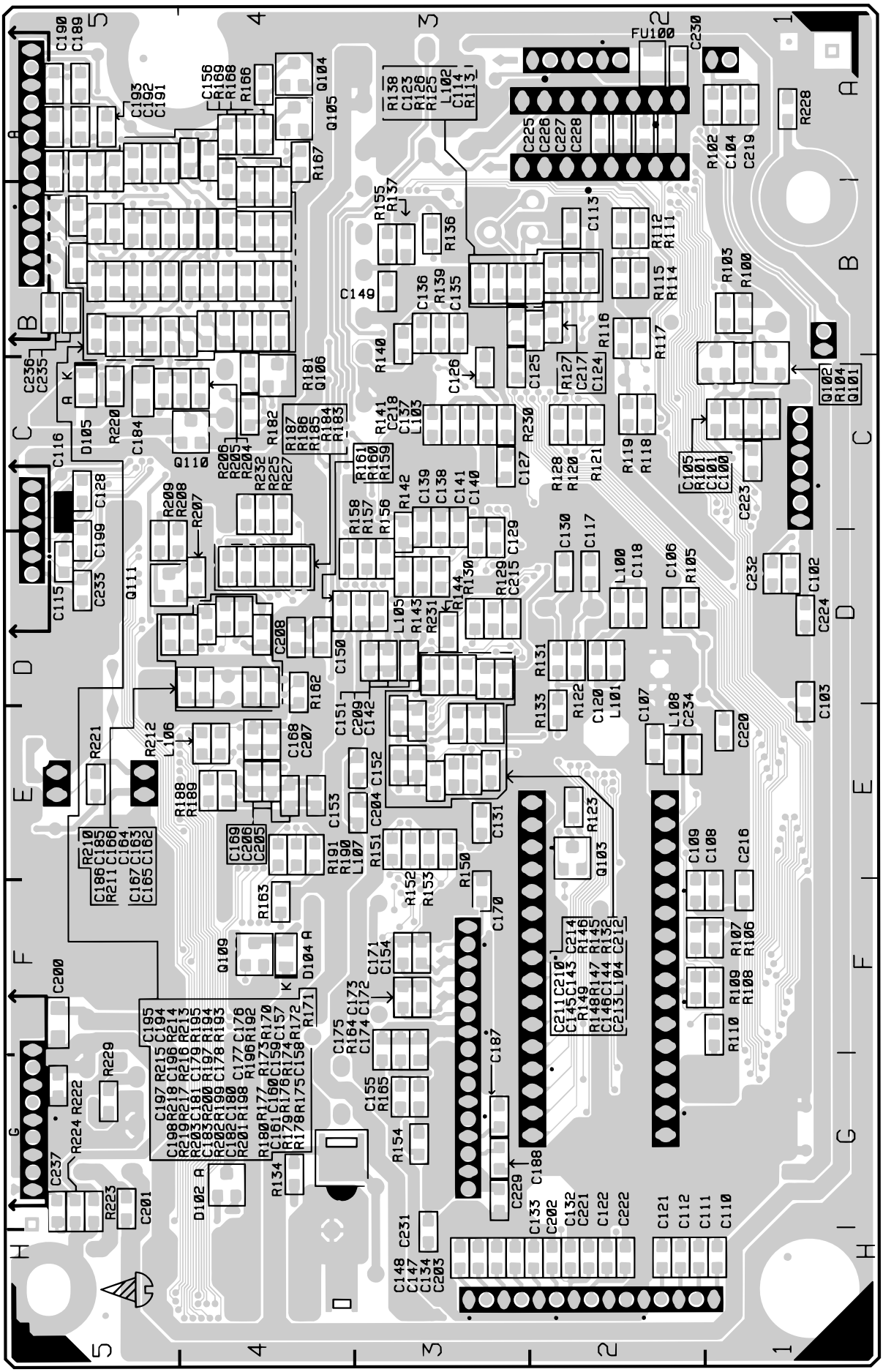

Analog signal block (UX-370ES/SE/FO-780AT/ES)
6/7
IC11 4053
IC12 2902
IC10 MC34119
TXCONT
SIGTX
TELOUT
CNLIUA-1
VREF
TXOUT
CNLIUA-10
GAINC
SIGRX
AGD
MAG
RXIN
CNLIUA-9
EXSIG
CNLIUB-1
RCVOL
CNLIUB-6
TELIN
CNLIUA-2
BZCONT
BZOUT
VOLA
VOLB
SPMUTE
CNSP-1
CNSP-2
SP+
SP-
+5V
+24VA
DG
N.M.
SEIAT

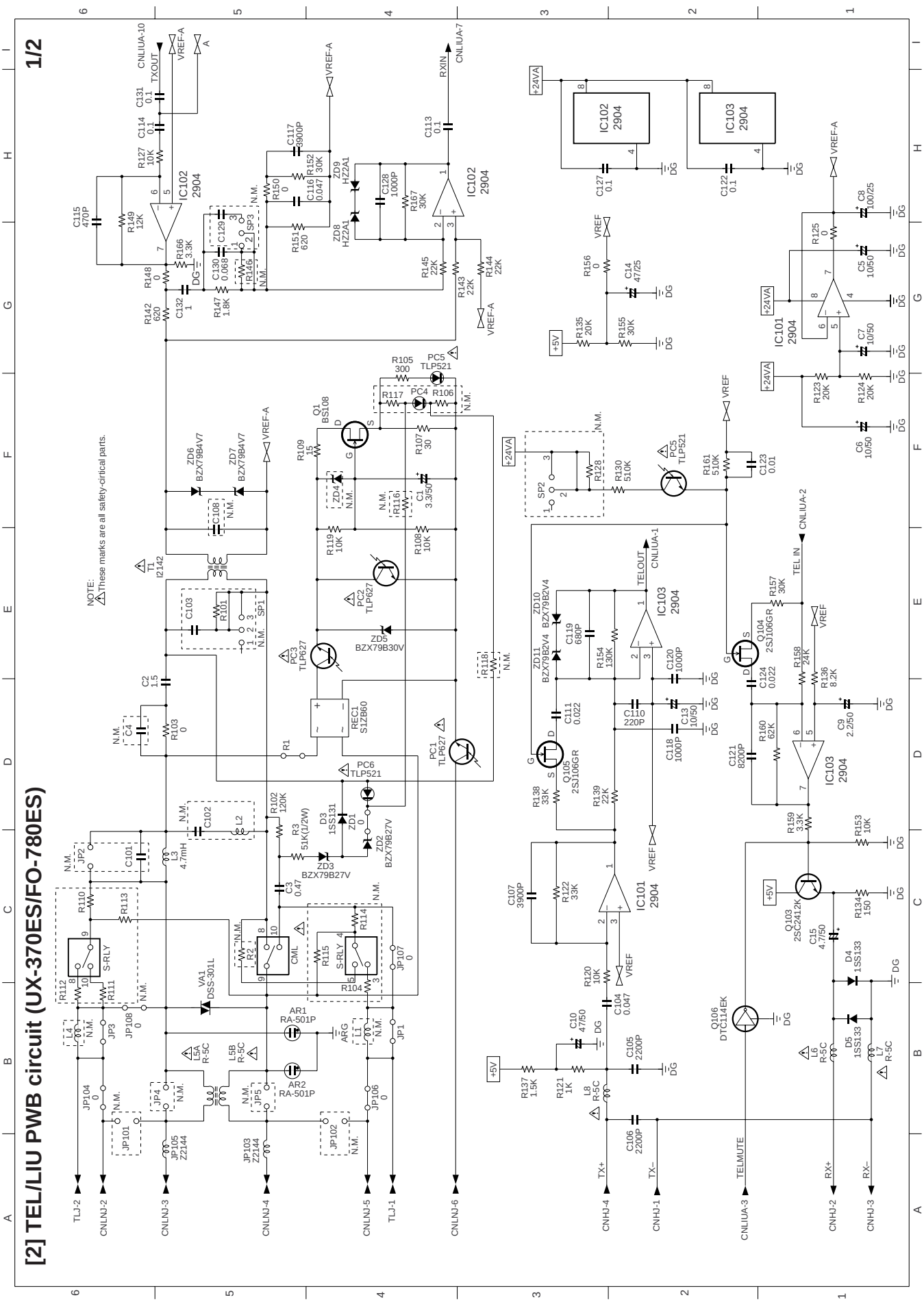

Analog signal block (UX-370F)
7/7
IC11 4053
IC12 2902
IC10 MC34119
Q104 DTC114EK
Q105 DTC114EK
Q106
D105 1SS355
BZCONT
SP+
SP−
CNSP-1
CNSP-2
SPMUTE
VOLB
VOLA
BZOUT
TELOUT
SIGTX
TXOUT
TELIN
RXIN
EXSIG
RCVOL
MAG
GAINC
SIGRX
AGD
TXCONT
VREF
+5V
+24VA
DG
N.M.

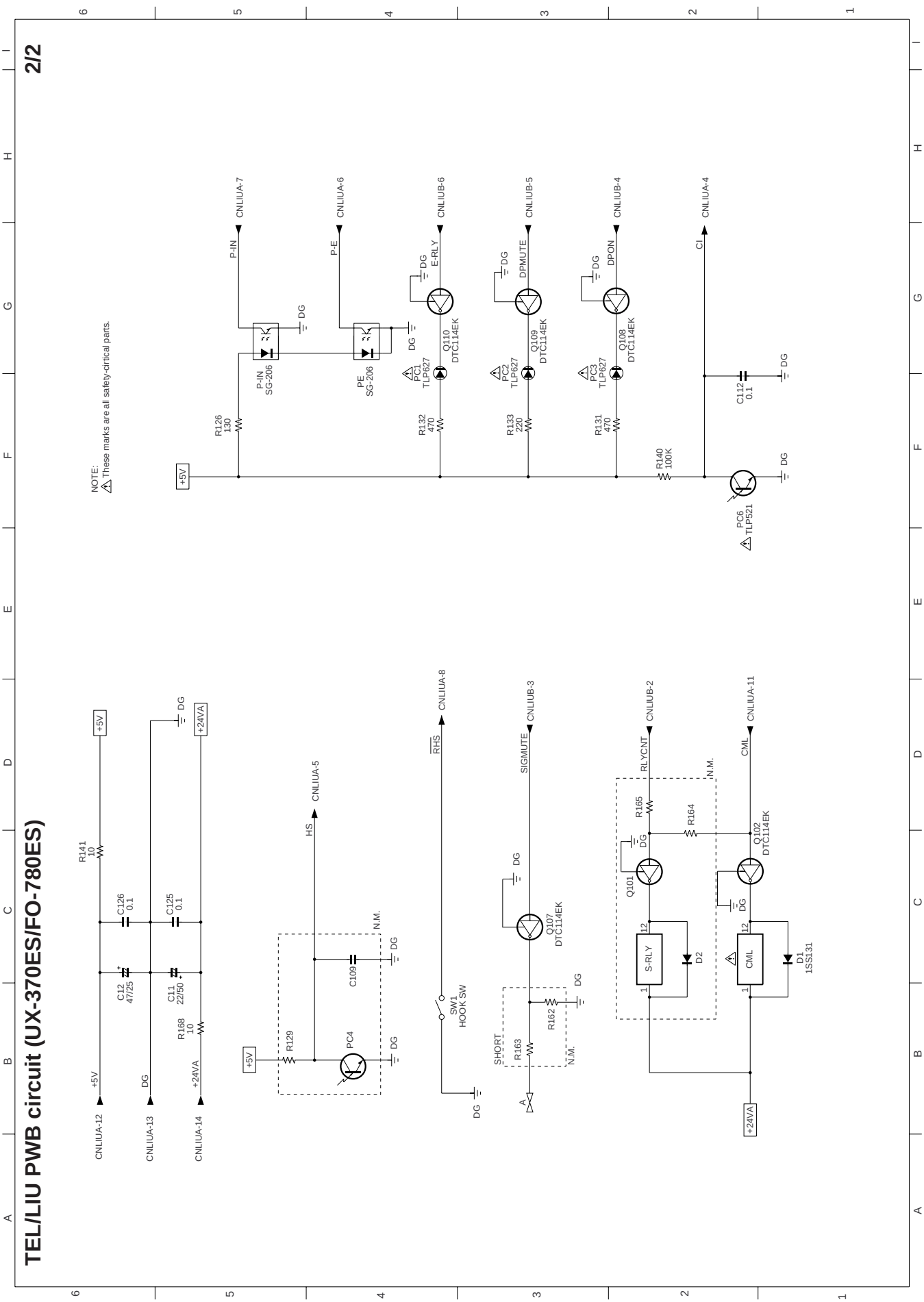
Control PWB parts layout (Top side)

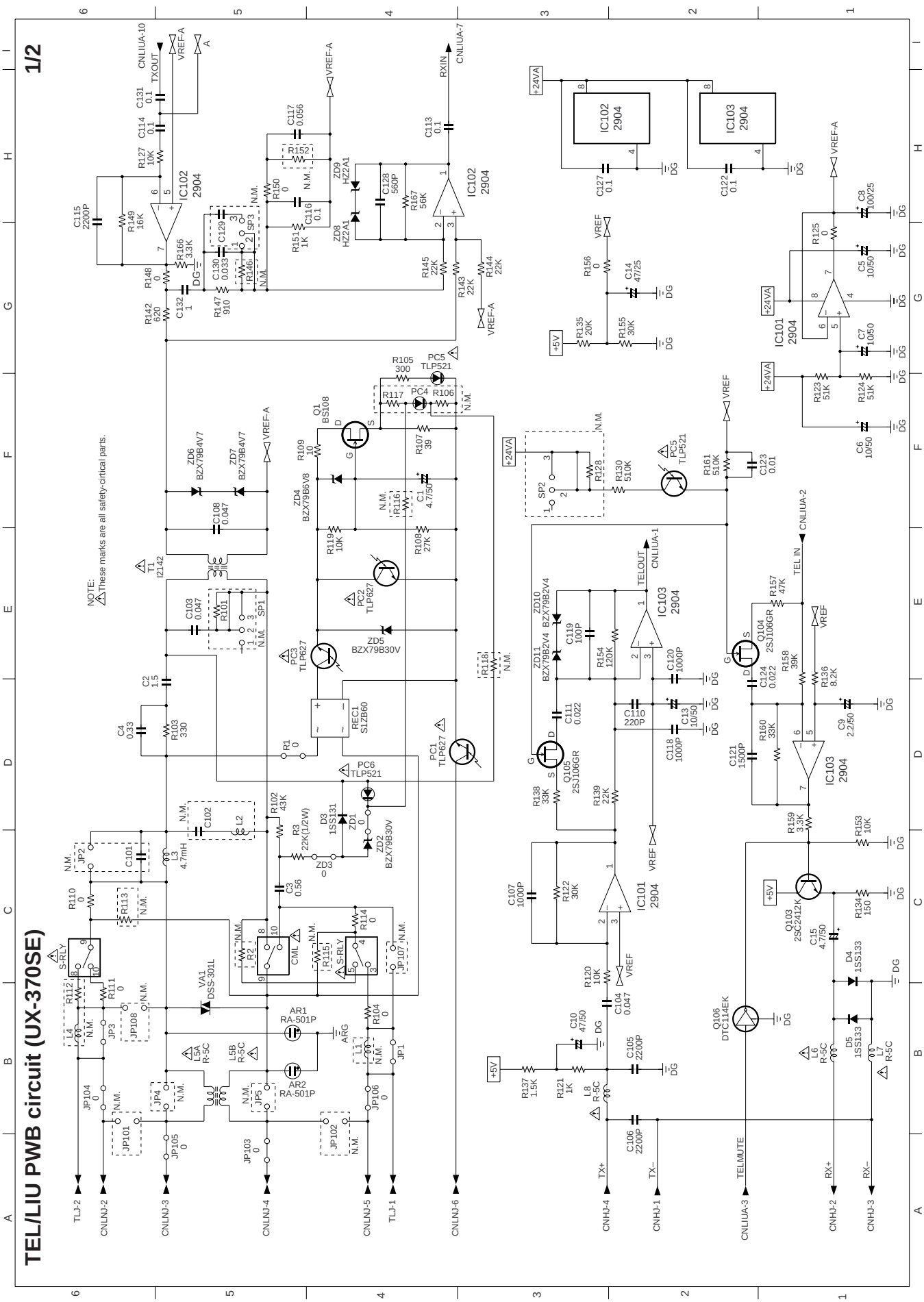


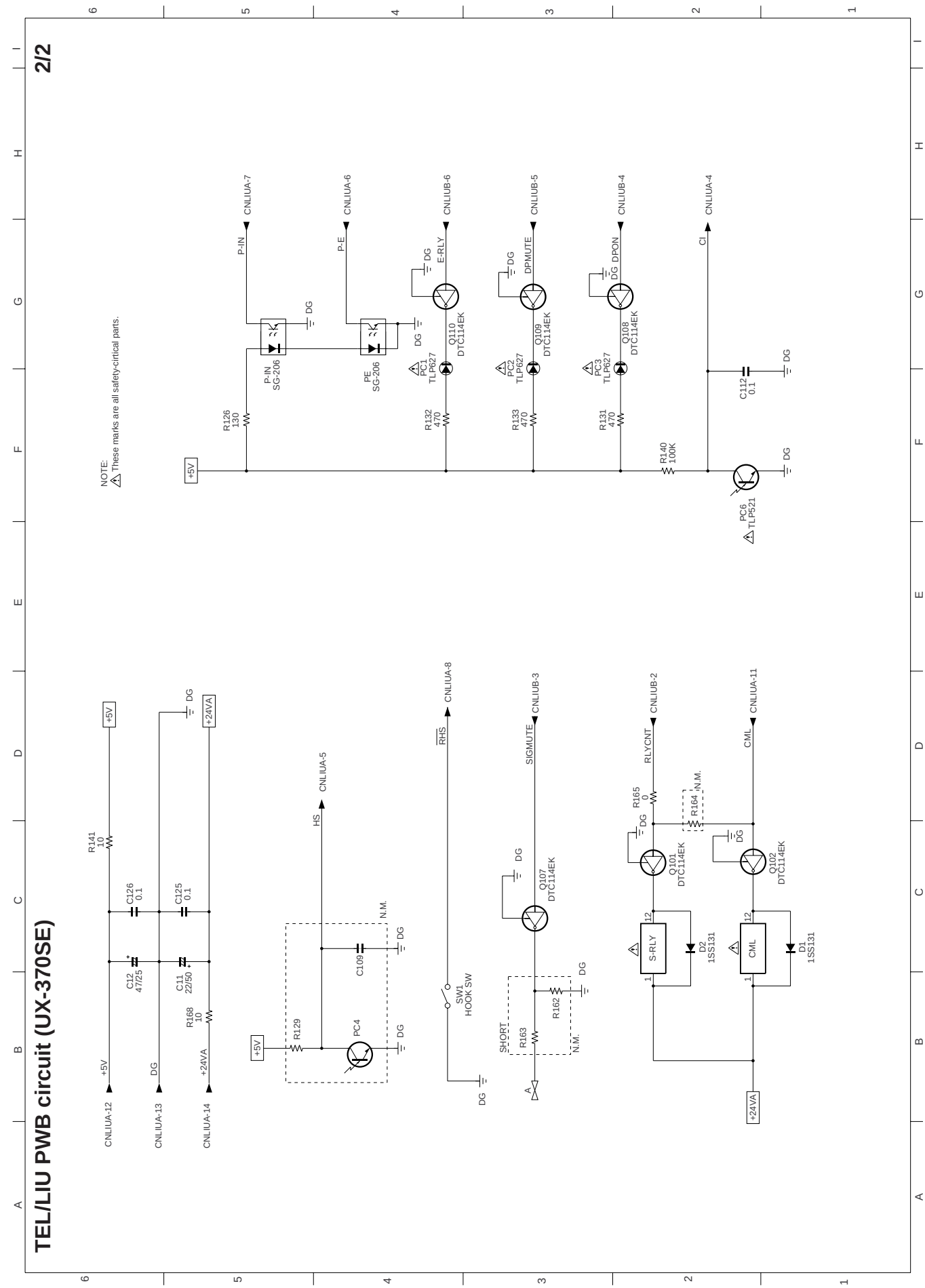
Control PWB parts layout (Bottom side)

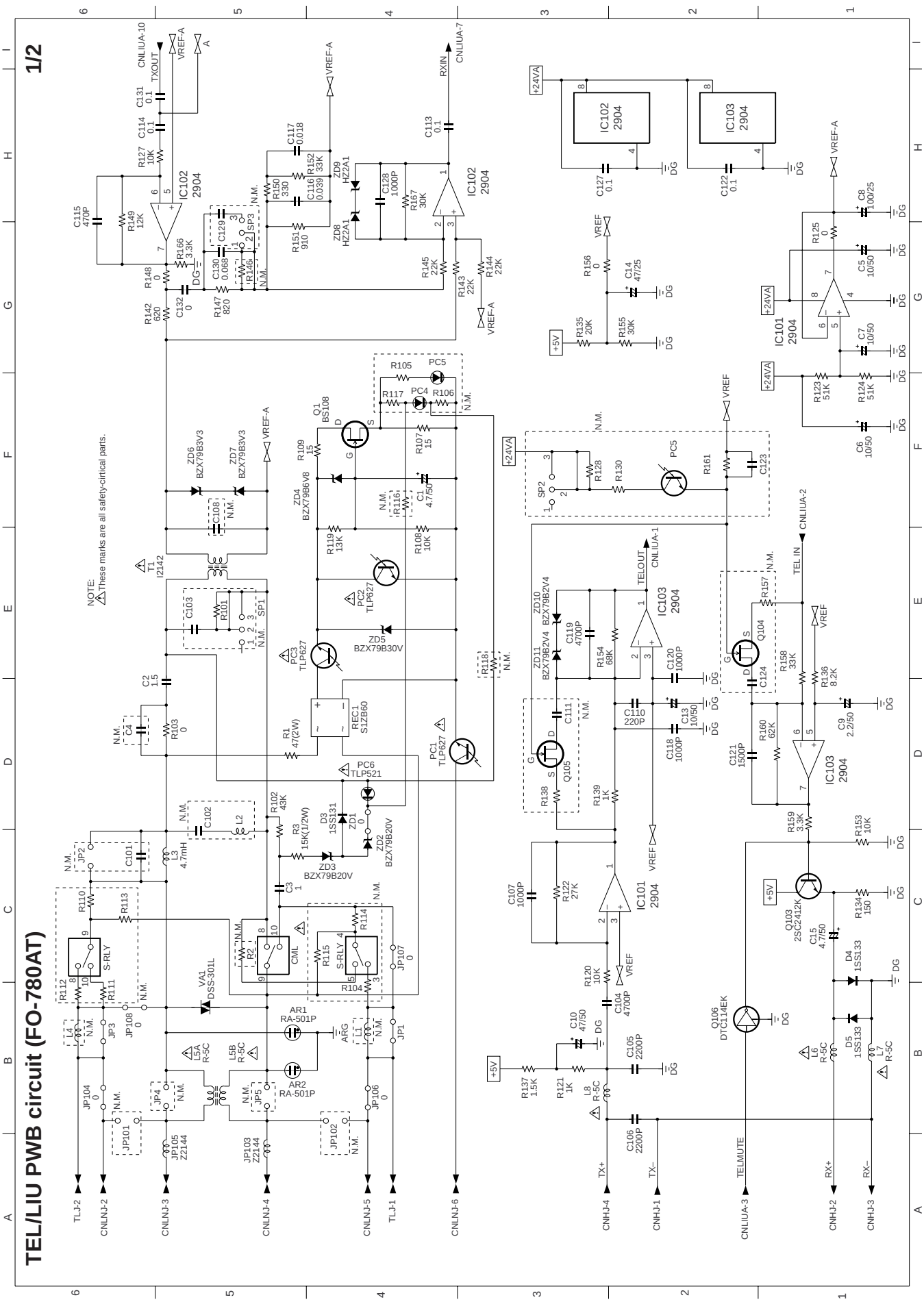


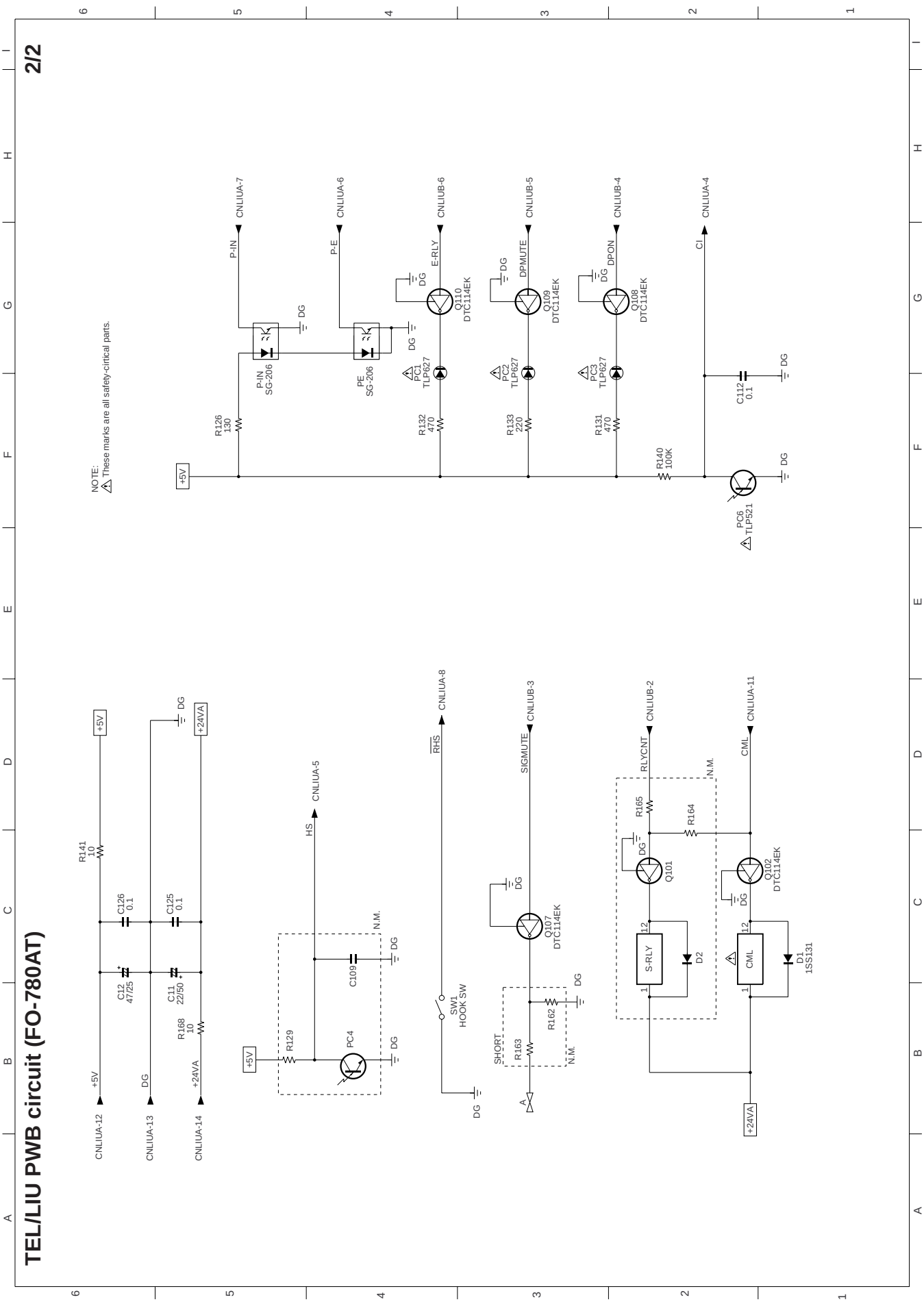

[2] TEL/LIU PWB circuit (UX-370ES/FO-780ES)
1/2
NOTE:
⚠ These marks are all safety-cirtical parts.
IC101 2904
IC102 2904
IC103 2904
CNLIUA-1
CNLIUA-2
CNLIUA-3
CNLIUA-4
CNLIUA-5
CNLIUA-6
CNLIUA-7
CNLNJ-2
CNLNJ-3
CNLNJ-4
CNLNJ-5
CNLNJ-6
CNHJ-1
CNHJ-2
CNHJ-3
CNHJ-4
TLJ-1
TLJ-2
TXOUT
RXIN
TELOUT
TEL IN
TELMUTE
TX+
TX−
RX+
RX−
VREF-A
VREF
+24VA
+5V
DG
PC1 TLP627
PC2 TLP627
PC3 TLP627
PC4
PC5 TLP521
PC6 TLP521
Q1 BS108
Q103 2SC2412K
Q104 2SJ106GR
Q105 2SJ106GR
Q106 DTC114EK
REC1 S1ZB60
VA1 DSS-301L
AR1 RA-501P
AR2 RA-501P
S-RLY
CML
SP1
SP2
SP3
T1 I2142
ZD1 0
ZD2 BZX79B27V
ZD3 BZX79B27V
ZD4 N.M.
ZD5 BZX79B30V
ZD6 BZX79B4V7
ZD7 BZX79B4V7
ZD8 HZ2A1
ZD9 HZ2A1
ZD10 BZX79B2V4
ZD11 BZX79B2V4
D3 1SS131
D4 1SS133
D5 1SS133


TEL/LIU PWB circuit (UX-370ES/FO-780ES)
2/2
NOTE:
⚠ These marks are all safety-critical parts.
CNLIUA-12
CNLIUA-13
CNLIUA-14
+5V
DG
+24VA
R141 10
C126 0.1
C12 47/25
C125 0.1
C11 22/50
R168 10
CNLIUA-5
HS
R129
PC4
C109
N.M.
CNLIUA-8
RHS
SW1 HOOK SW
CNLIUB-3
SIGMUTE
Q107 DTC114EK
SHORT
R163
R162
A
CNLIUB-2
RLYCNT
R165
R164
Q101
S-RLY
D2
CNLIUA-11
CML
Q102 DTC114EK
D1 1SS131
CNLIUA-7
P-IN
P-IN SG-206
R126 130
CNLIUA-6
P-E
PE SG-206
CNLIUB-6
E-RLY
PC1 TLP627
Q110 DTC114EK
R132 470
CNLIUB-5
DPMUTE
PC2 TLP627
Q109 DTC114EK
R133 220
CNLIUB-4
DPON
PC3 TLP627
Q108 DTC114EK
R131 470
CNLIUA-4
CI
C112 0.1
R140 100K
PC6 TLP521

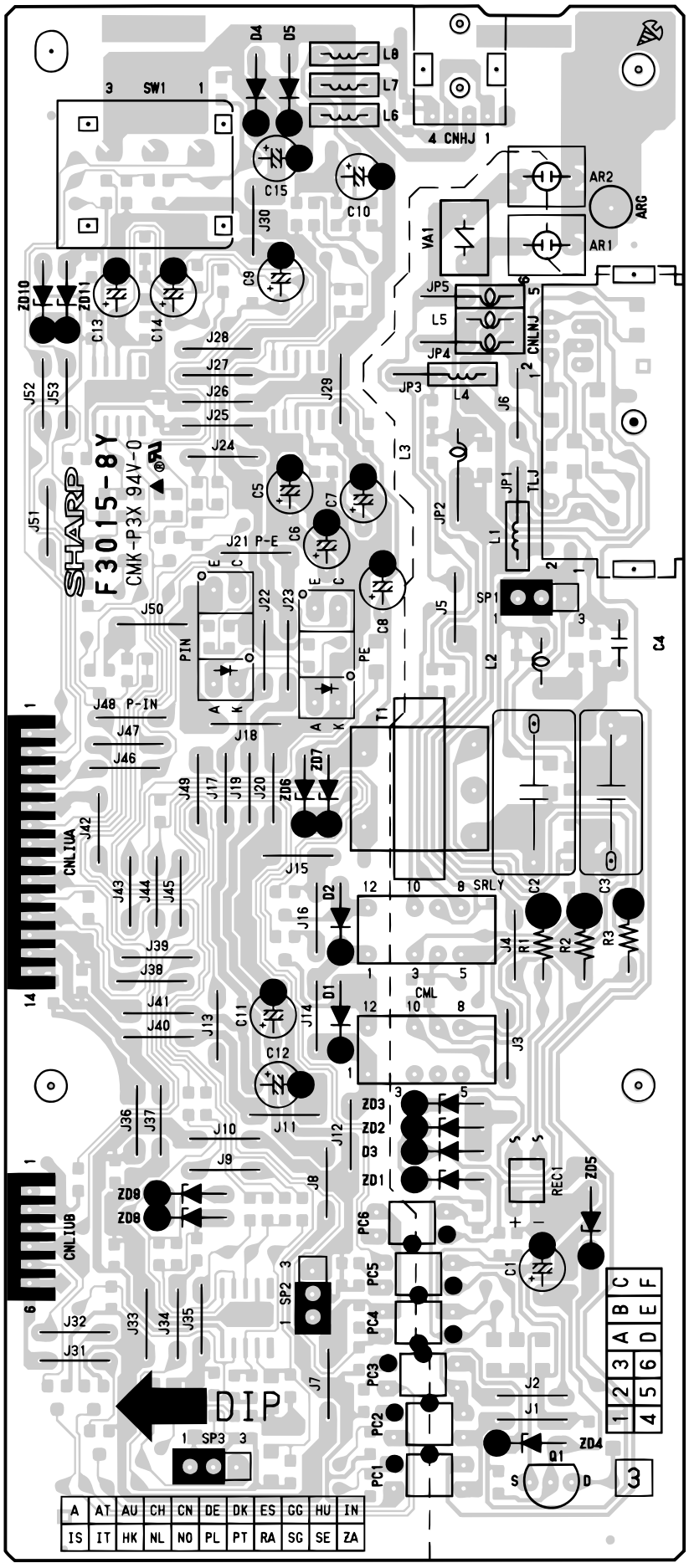

TEL/LIU PWB circuit (UX-370SE)
1/2
NOTE:
⚠These marks are all safety-cirtical parts.
IC102 2904
IC103 2904
IC101 2904
CNLIUA-10
CNLIUA-7
CNLIUA-1
CNLIUA-2
CNLIUA-3
CNHJ-4
CNHJ-1
CNHJ-2
CNHJ-3
CNLNJ-2
CNLNJ-3
CNLNJ-4
CNLNJ-5
CNLNJ-6
TLJ-2
TLJ-1
TX+
TX−
RX+
RX−
TELMUTE
TEL IN
TELOUT
TXOUT
RXIN
VREF-A
VREF
+24VA
+5V
DG
T1 I2142
REC1 S1ZB60
VA1 DSS-301L
AR1 RA-501P
AR2 RA-501P
Q1 BS108
Q103 2SC2412K
Q104 2SJ106GR
Q105 2SJ106GR
Q106 DTC114EK
PC1 TLP627
PC2 TLP627
PC3 TLP627
PC4
PC5 TLP521
PC6 TLP521
ZD1 1SS131
ZD2 BZX79B30V
ZD3
ZD4 BZX79B6V8
ZD5 BZX79B30V
ZD6 BZX79B4V7
ZD7 BZX79B4V7
ZD8 HZ2A1
ZD9 HZ2A1
ZD10 BZX79B2V4
ZD11 BZX79B2V4
S-RLY
CML
SP1
SP2
SP3
JP1
JP2
JP3
JP4
JP5
JP101
JP102
JP103
JP104
JP105
JP106
JP107
JP108
L1
L2
L3 4.7mH
L4
L5A R-5C
L5B R-5C
L6 R-5C
L7 R-5C
L8 R-5C
N.M.


TEL/LIU PWB circuit (UX-370SE)
2/2
NOTE:
⚠ These marks are all safety-critical parts.
CNLIUA-12
CNLIUA-13
CNLIUA-14
CNLIUA-7
CNLIUA-6
CNLIUA-5
CNLIUA-4
CNLIUB-6
CNLIUB-5
CNLIUB-4
CNLIUB-3
CNLIUB-2
CNLIUA-8
CNLIUA-11
+5V
DG
+24VA
P-IN
P-E
HS
CI
E-RLY
DPMUTE
DPON
SIGMUTE
RLYCNT
CML
RHS
R141 10
C126 0.1
C12 47/25
C11 22/50
C125 0.1
R168 10
R126 130
P-IN SG-206
PE SG-206
PC1 TLP627
R132 470
Q110 DTC114EK
PC2 TLP627
R133 470
Q109 DTC114EK
PC3 TLP627
R131 470
Q108 DTC114EK
R140 100K
C112 0.1
PC6 TLP521
R129
PC4
C109
N.M.
SW1 HOOK SW
SHORT
R163
R162
Q107 DTC114EK
R165 0
R164
Q101 DTC114EK
Q102 DTC114EK
S-RLY
CML
D2 1SS131
D1 1SS131

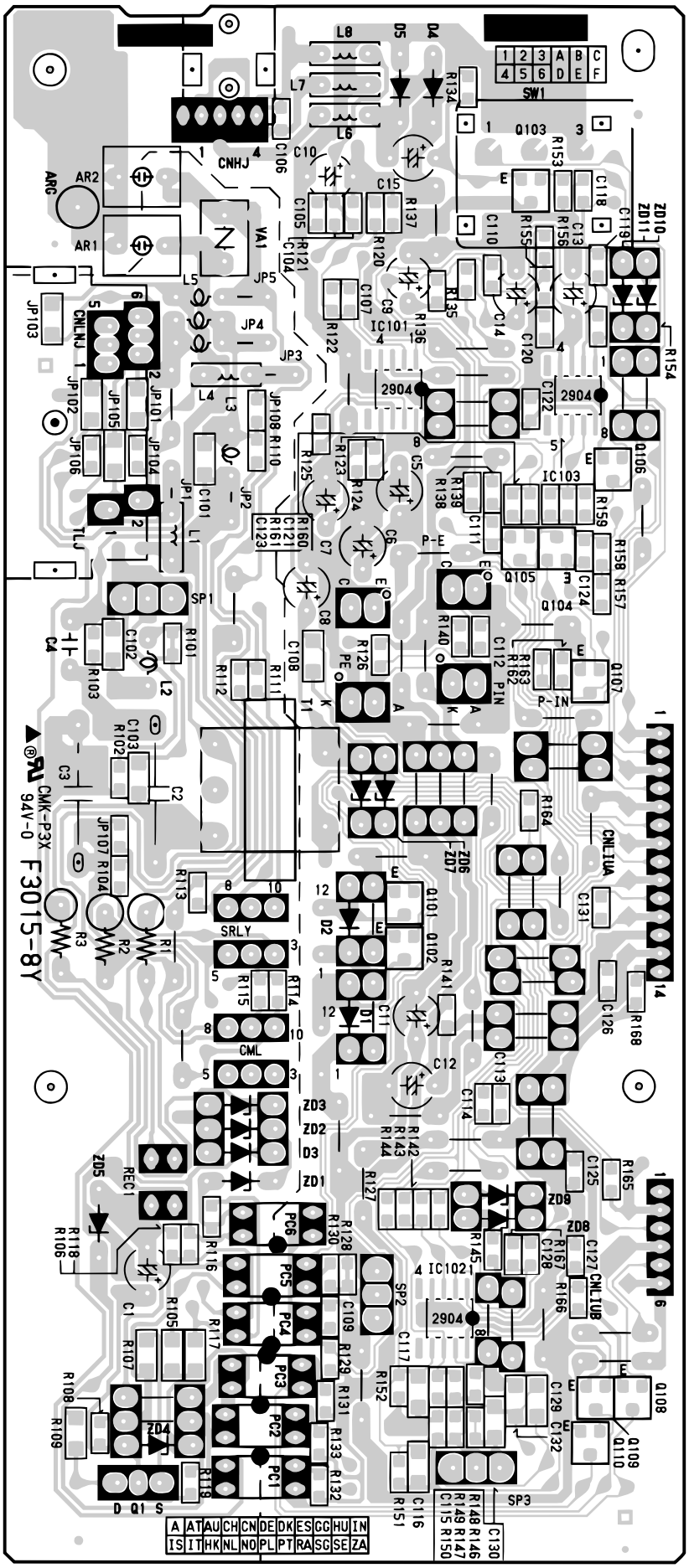

TEL/LIU PWB circuit (FO-780AT)
1/2
NOTE:
⚠These marks are all safety-cirtical parts.
IC101 2904
IC102 2904
IC103 2904
CNLIUA-10
CNLIUA-7
CNLIUA-1
CNLIUA-2
CNLIUA-3
TXOUT
RXIN
TEL IN
TELOUT
TELMUTE
VREF-A
VREF
+24VA
+5V
TLJ-2
CNLNJ-2
CNLNJ-3
CNLNJ-4
CNLNJ-5
TLJ-1
CNLNJ-6
CNHJ-4
CNHJ-1
CNHJ-2
CNHJ-3
TX+
TX−
RX+
RX−
S-RLY
CML
VA1 DSS-301L
AR1 RA-501P
AR2 RA-501P
T1 I2142
REC1 S1ZB60
PC1 TLP627
PC2 TLP627
PC3 TLP627
PC4
PC5
PC6 TLP521
Q1 BS108
Q103 2SC2412K
Q104
Q105
Q106 DTC114EK
ZD1 1SS131
ZD2 BZX79B20V
ZD3 BZX79B20V
ZD4 BZX79B6V8
ZD5 BZX79B30V
ZD6 BZX79B3V3
ZD7 BZX79B3V3
ZD8 HZ2A1
ZD9 HZ2A1
ZD10 BZX79B2V4
ZD11 BZX79B2V4
D3 1SS131
D4 1SS133
D5 1SS133
SP1
SP2
SP3
JP1
JP2
JP3
JP4
JP5
JP101
JP102
JP103 Z2144
JP104
JP105 Z2144
JP106
JP107
JP108

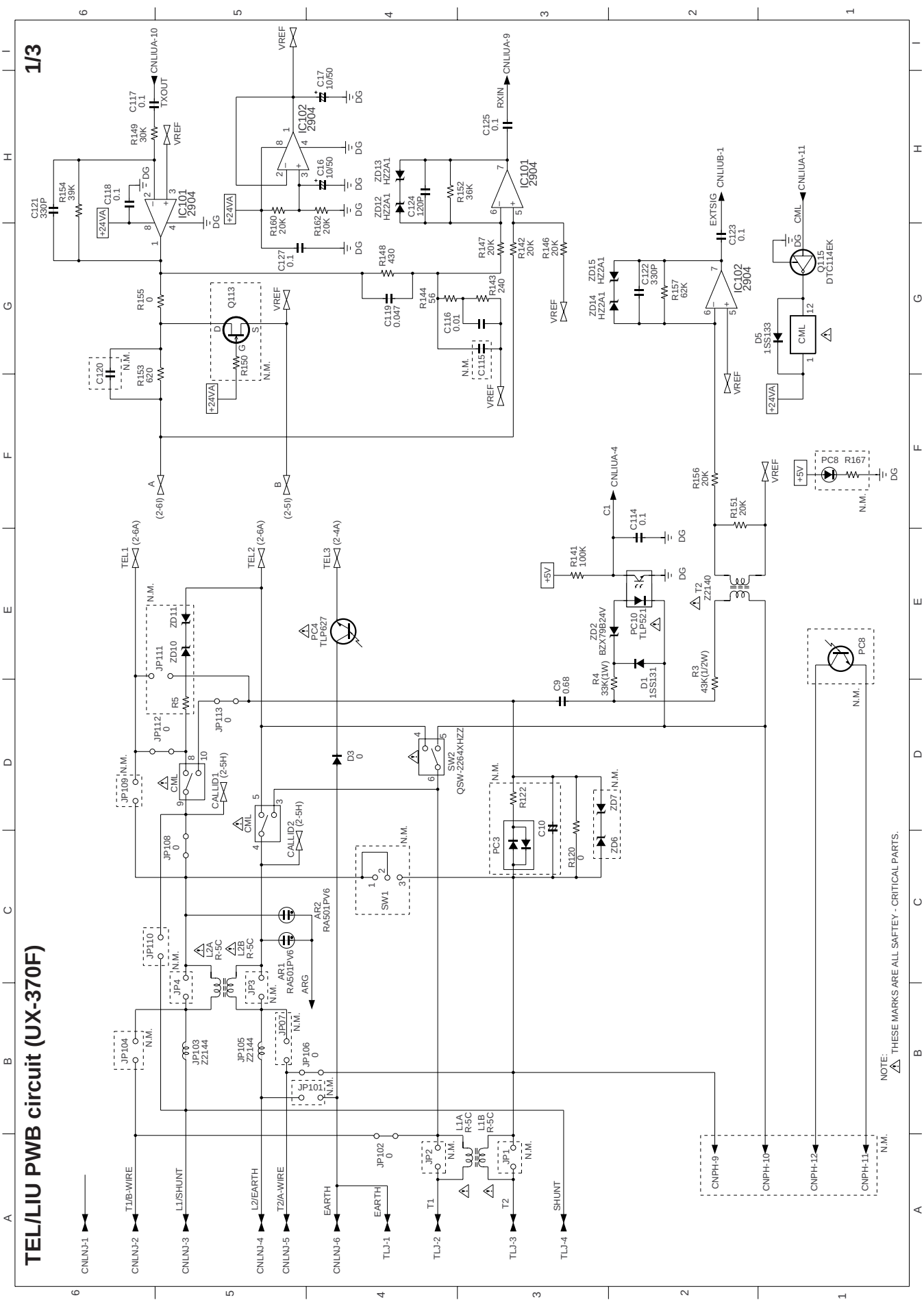

TEL/LIU PWB circuit (FO-780AT)
2/2
NOTE:
⚠ These marks are all safety-critical parts.
CNLIUA-12
CNLIUA-13
CNLIUA-14
CNLIUA-5
CNLIUA-8
CNLIUB-3
CNLIUB-2
CNLIUA-11
CNLIUA-7
CNLIUA-6
CNLIUB-6
CNLIUB-5
CNLIUB-4
CNLIUA-4
+5V
DG
+24VA
R141 10
C126 0.1
C12 47/25
C125 0.1
C11 22/50
R168 10
HS
R129
PC4
C109
N.M.
RHS
SW1 HOOK SW
SIGMUTE
Q107 DTC114EK
SHORT
R163
R162
A
RLYCNT
R165
R164
Q101
S-RLY
D2
CML
Q102 DTC114EK
D1 1SS131
P-IN
P-E
E-RLY
DPMUTE
DPON
CI
P-IN SG-206
PE SG-206
PC1 TLP627
PC2 TLP627
PC3 TLP627
PC6 TLP521
Q110 DTC114EK
Q109 DTC114EK
Q108 DTC114EK
R126 130
R132 470
R133 220
R131 470
R140 100K
C112 0.1

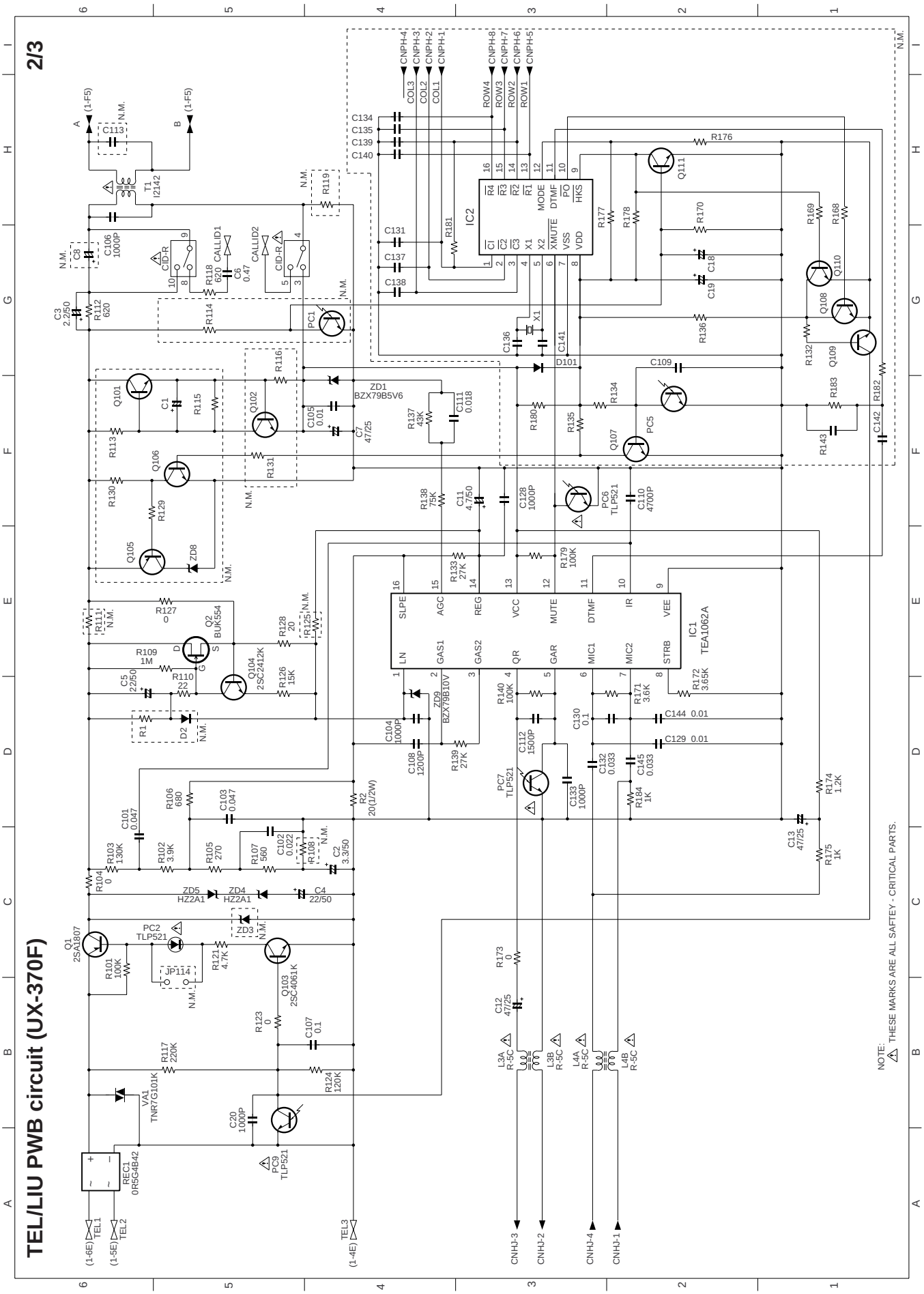
TEL/LIU PWB parts layout (Top side) (UX-370ES/SE/FO-780AT/ES)

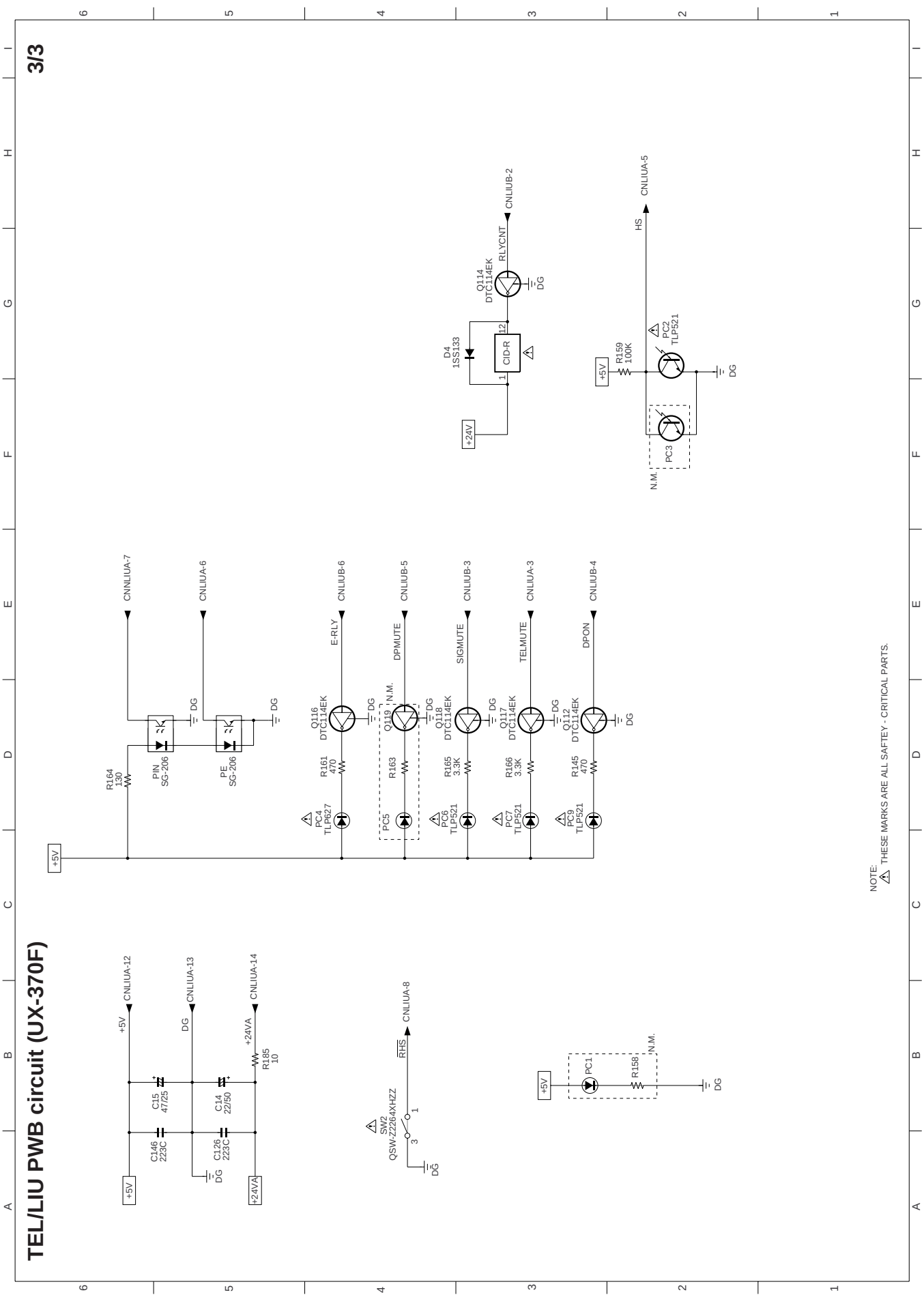


TEL/LIU PWB parts layout (Bottom side) (UX-370ES/SE/FO-780AT/ES)

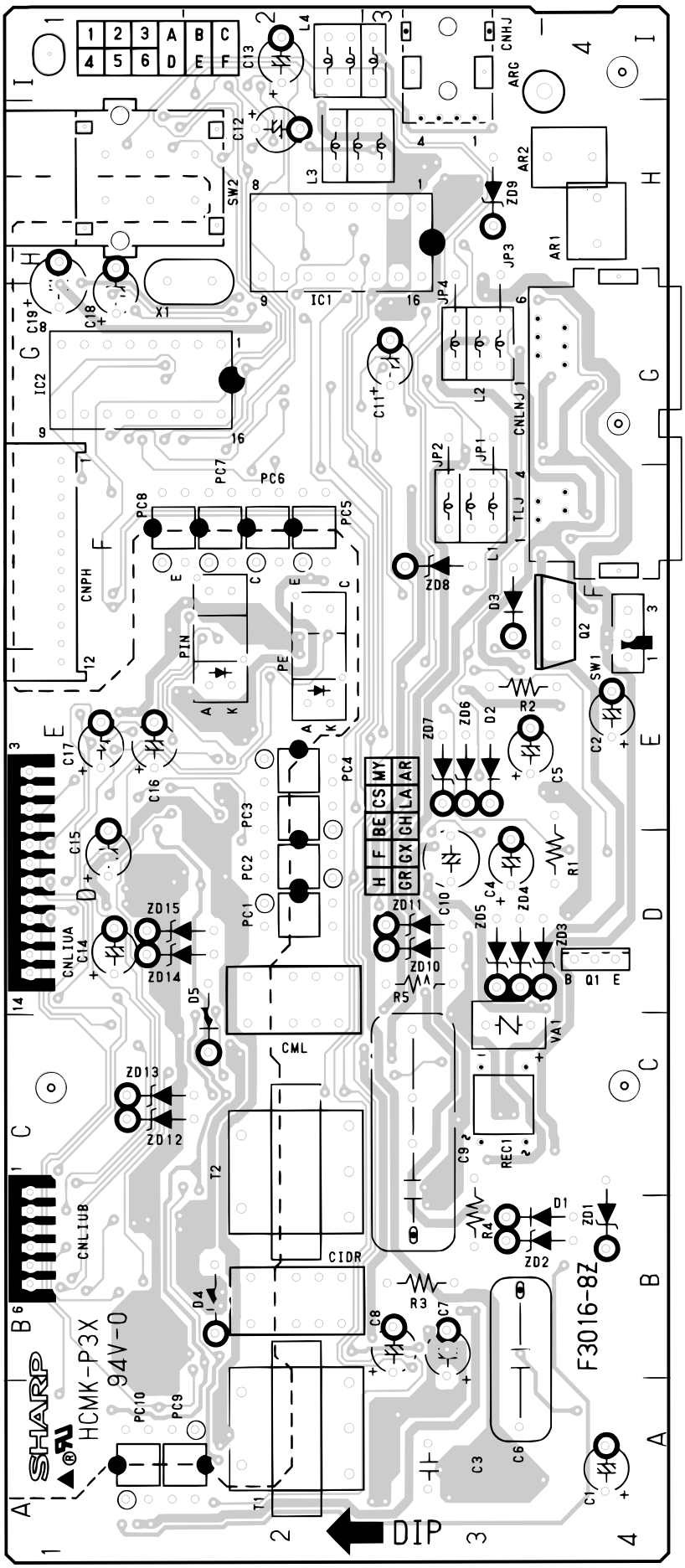



TEL/LIU PWB circuit (UX-370F)
1/3
NOTE:
⚠ THESE MARKS ARE ALL SAFTEY - CRITICAL PARTS.

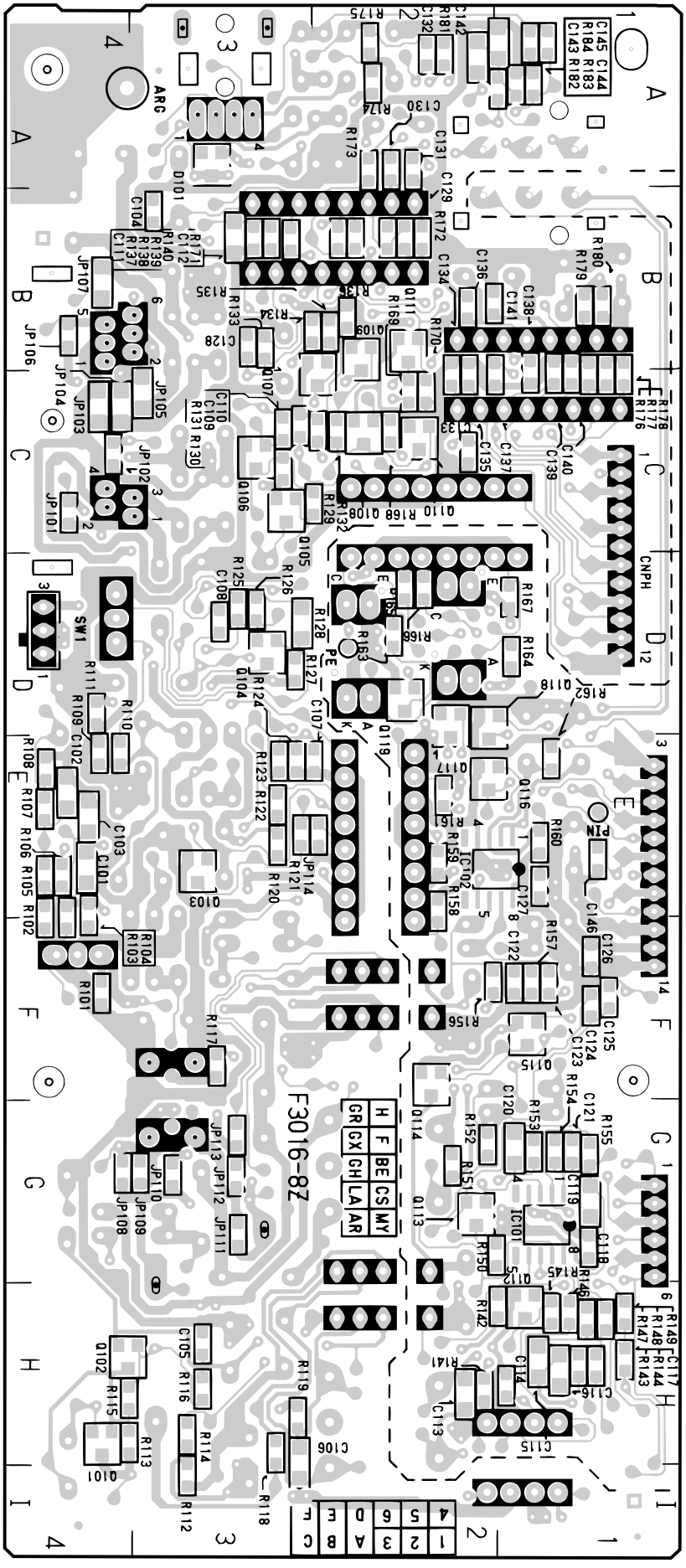

TEL/LIU PWB circuit (UX-370F)
2/3
IC1 TEA1062A
IC2
Q1 2SA1807
Q2 BUK554
Q101
Q102
Q103 2SC4061K
Q104 2SC2412K
Q105
Q106
Q107
Q108
Q109
Q110
Q111
PC1
PC2 TLP521
PC5
PC6 TLP521
PC7 TLP521
PC9 TLP521
REC1 0R5G4B42
VA1 TNR7G101K
ZD1 BZX79B5V6
ZD3
ZD4 HZ2A1
ZD5 HZ2A1
ZD8
ZD9 BZX79B10V
D101
D2
T1 I2142
L3A R-5C
L3B R-5C
L4A R-5C
L4B R-5C
JP114
CNPH-1
CNPH-2
CNPH-3
CNPH-4
CNPH-5
CNPH-6
CNPH-7
CNPH-8
CNHJ-1
CNHJ-2
CNHJ-3
CNHJ-4
TEL1
TEL2
TEL3
CID-R
CALLID1
CALLID2
N.M.
NOTE:
THESE MARKS ARE ALL SAFTEY - CRITICAL PARTS.


TEL/LIU PWB circuit (UX-370F)
3/3
CNLIUA-12
CNLIUA-13
CNLIUA-14
CNLIUA-8
CNLIUB-2
CNLIUA-5
CNNLIUA-7
CNLIUA-6
CNLIUB-6
CNLIUB-5
CNLIUB-3
CNLIUA-3
CNLIUB-4
+5V
DG
+24VA
+24V
C15 47/25
C146 223C
C14 22/50
C126 223C
R185 10
SW2 QSW-2264AHZZ
RHS
R164 130
PIN SG-206
PE SG-206
Q116 DTC114EK
E-RLY
R161 470
PC4 TLP627
Q119 N.M.
DPMUTE
R163
PC5
Q118 DTC114EK
SIGMUTE
R165 3.3K
PC6 TLP521
Q117 DTC114EK
TELMUTE
R166 3.3K
PC7 TLP521
Q112 DTC114EK
DPON
R145 470
PC9 TLP521
Q114 DTC114EK
RLYCNT
D4 1SS133
CID-R
HS
R159 100K
PC2 TLP521
PC3
N.M.
PC1
R158
NOTE:
⚠1 THESE MARKS ARE ALL SAFTEY - CRITICAL PARTS.

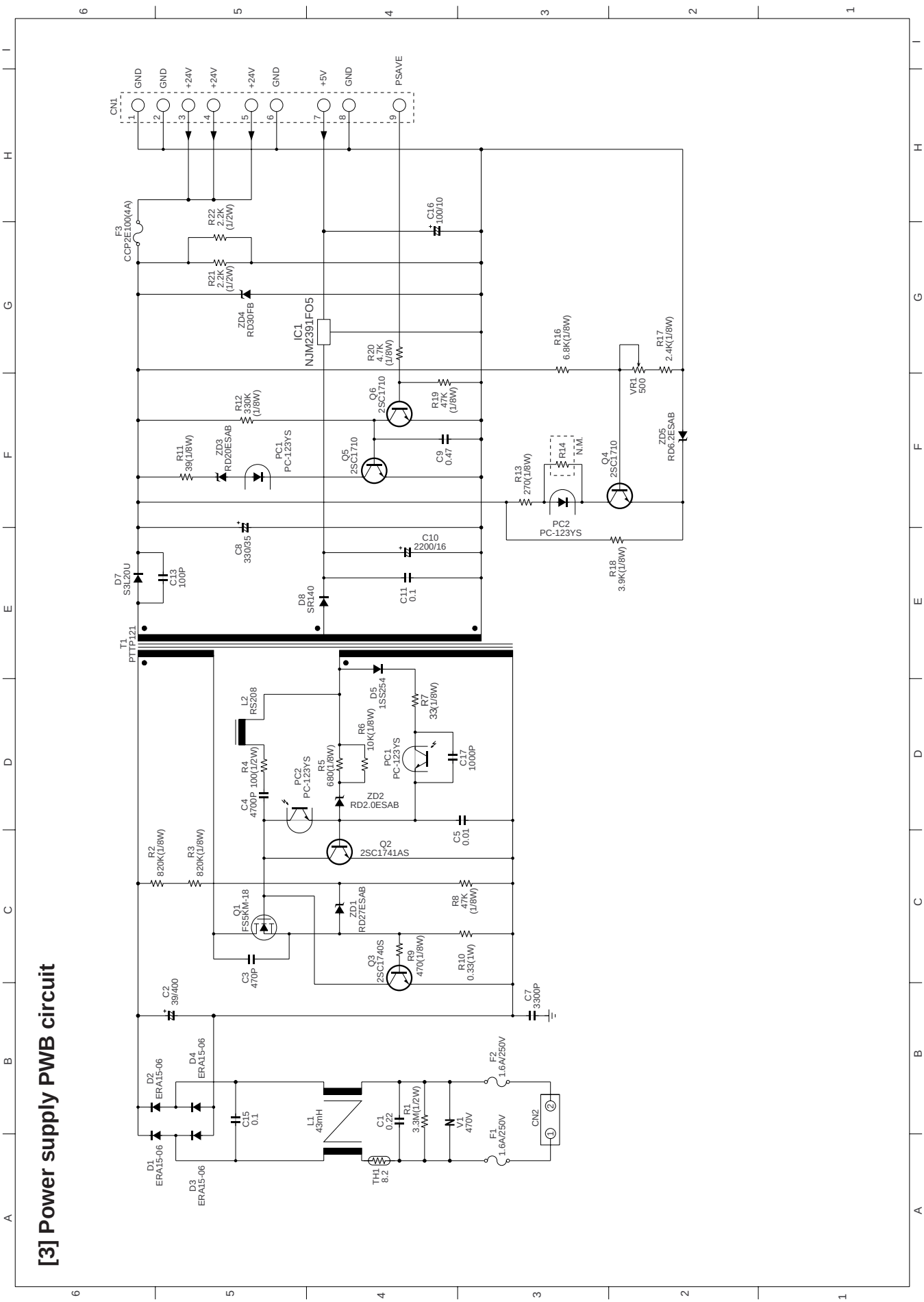
TEL/LIU PWB parts layout (Top side) (UX-370F)



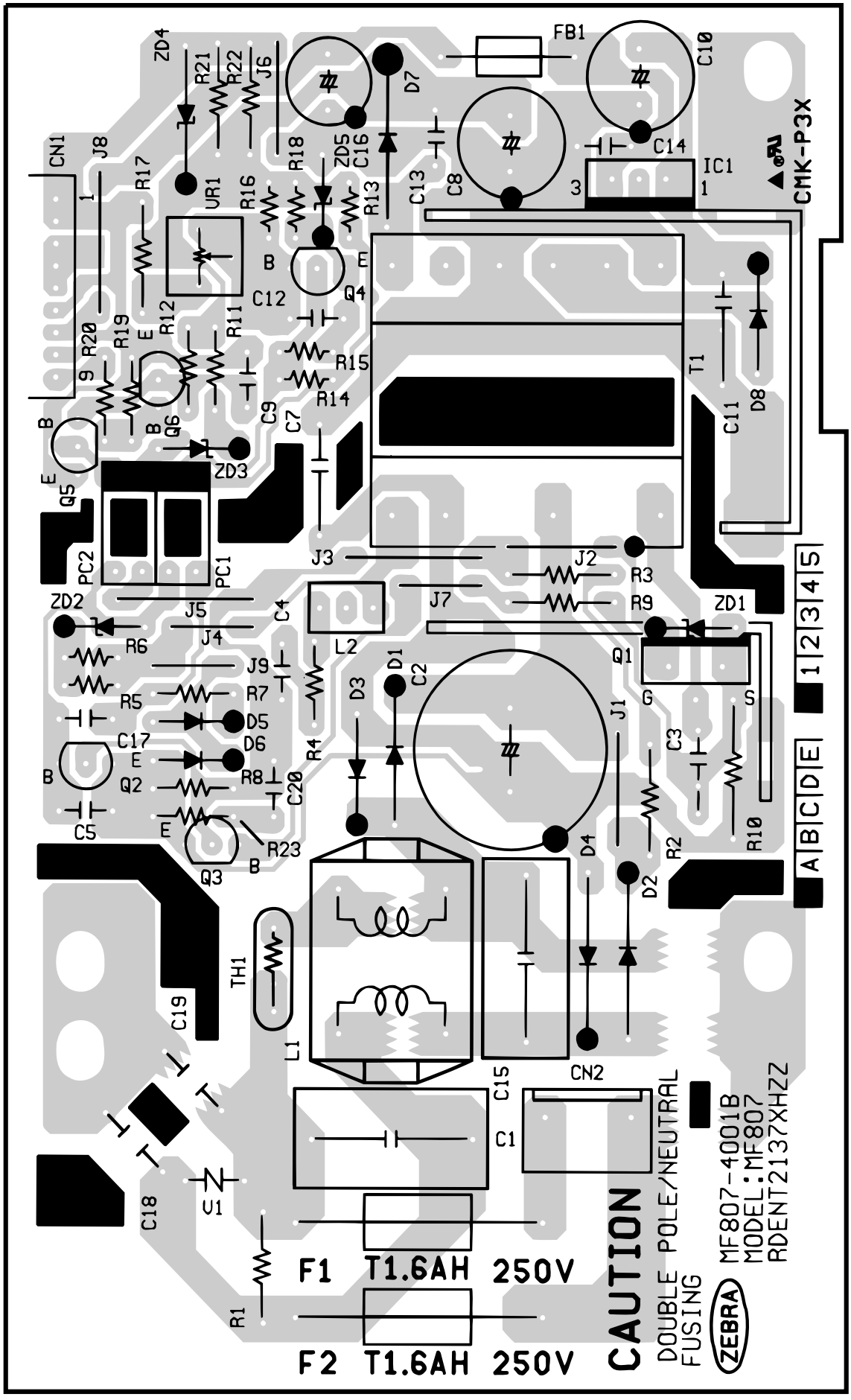
TEL/LIU PWB parts layout (Bottom side) (UX-370F)



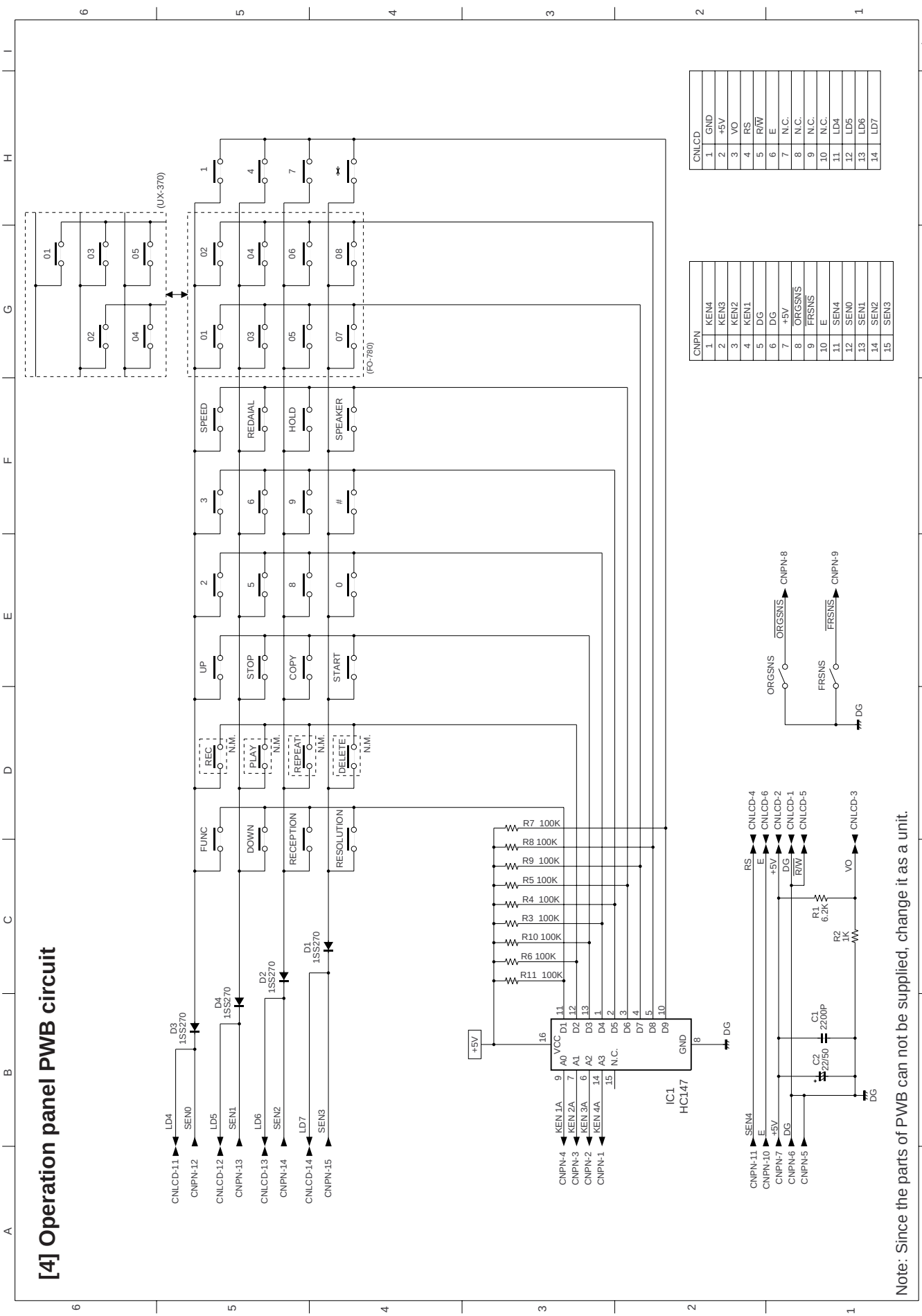
[3] Power supply PWB circuit



Power supply PWB parts layout



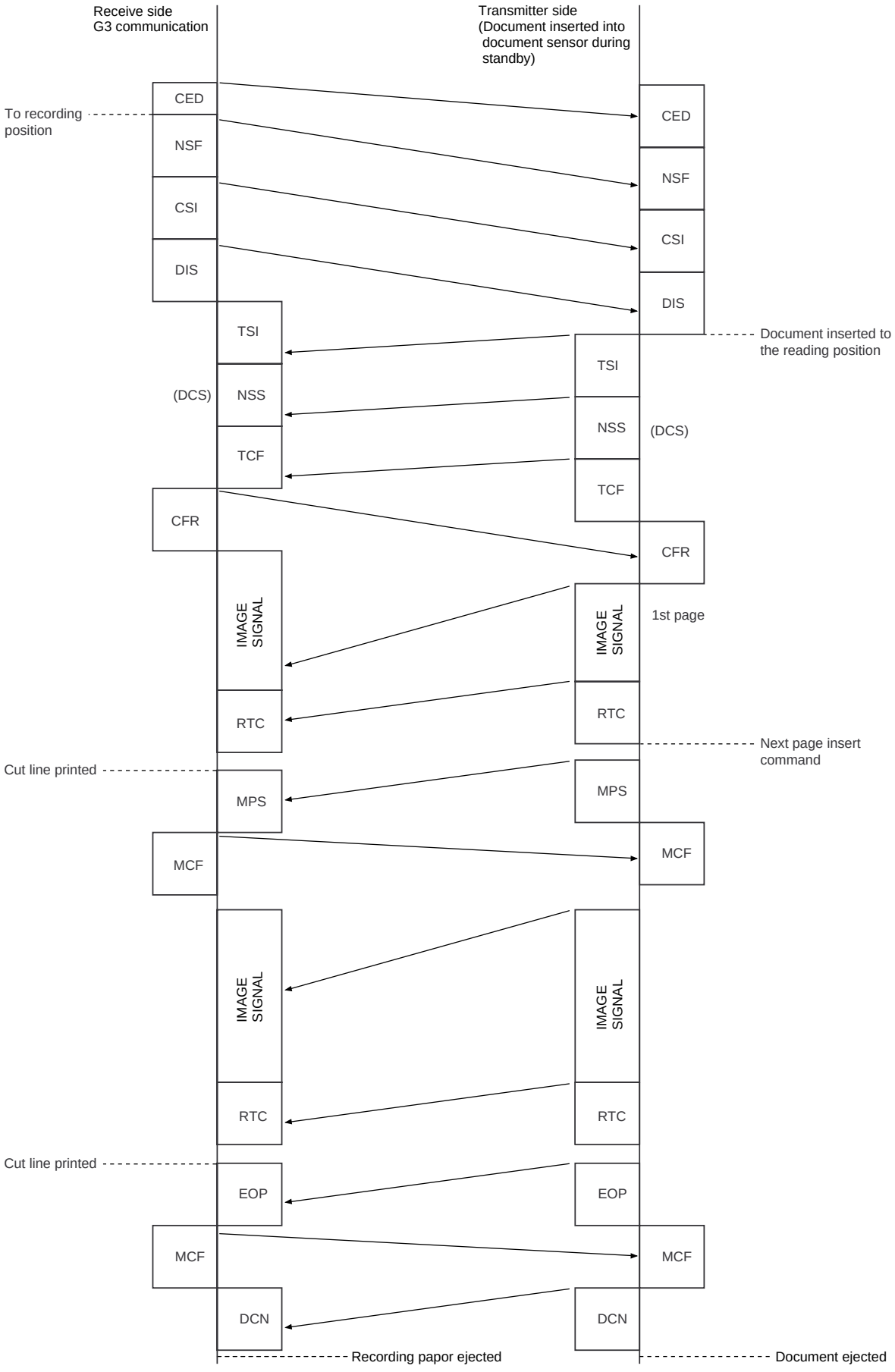
[4] Operation panel PWB circuit



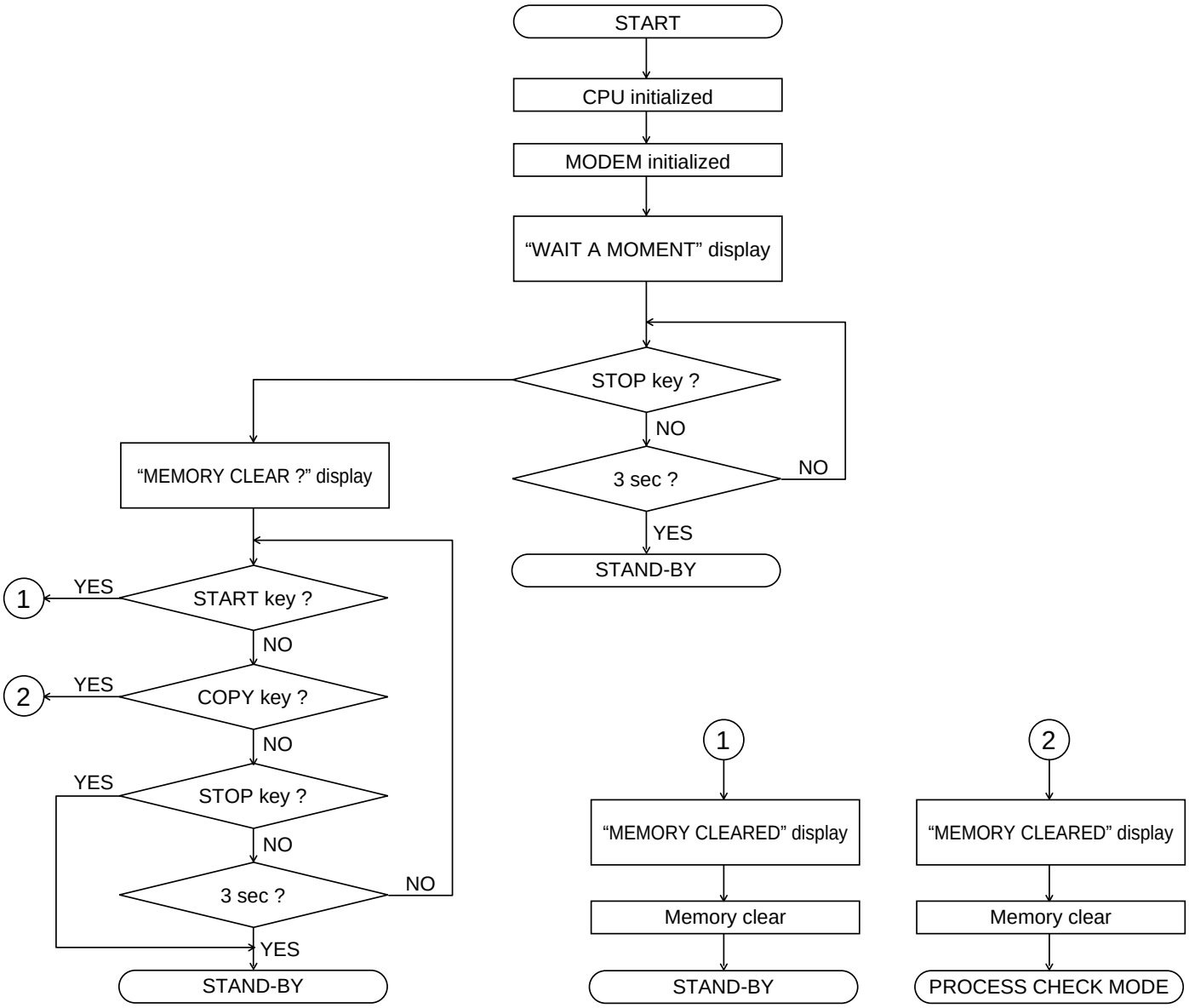
Note: Since the parts of PWB can not be supplied, change it as a unit.

CHAPTER 7. OPERATION FLOWCHART

[1] Protocol



[2] Power on sequence



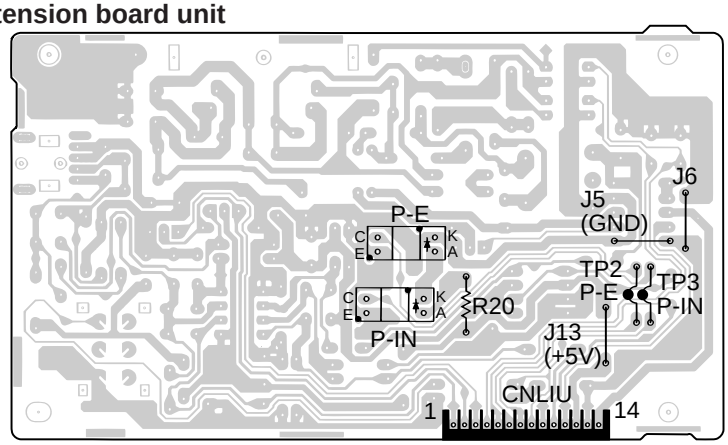
CHAPTER 8. OTHERS

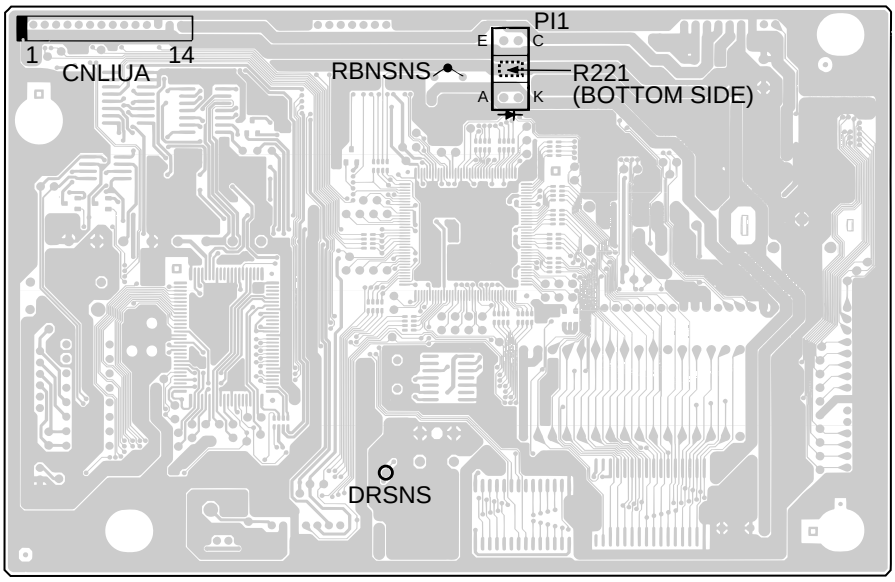
[1] Service tools

1. List

NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	C P W B S 3 0 0 2 S C S 1	Extension board unit (Control PWB)	1	BK
2	C P W B F 3 0 0 3 S C S 1	Extension board unit (TEL/LIU PWB)	1	BP
3	P S H E Z 3 3 5 4 S C Z Z	Shading wave memory standard paper	1	AD

Extension board unit



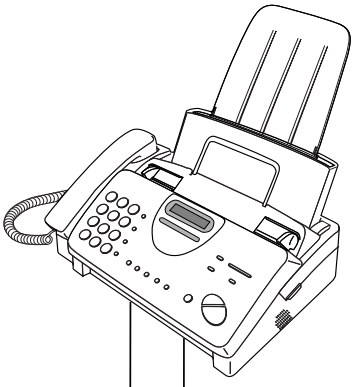


NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	C C N W – 4 7 5 6 S C 0 1	SPEAKER RELAY CABLE	1	AK
2	C C N W – 4 7 5 7 S C 0 1	PANEL RELAY CABLE	1	AW
3	C C N W – 4 7 5 8 S C 0 1	CIS RELAY CABLE	1	AQ
4	C C N W – 4 7 5 9 S C 0 1	HEAD RELAY CABLE	1	AX
5	C C N W – 4 7 6 0 S C 0 1	CAM SWITCH RELAY CABLE	1	AK
6	C C N W – 4 7 6 3 S C 0 1	MOTOR RELAY CABLE	1	AP
7	Q C N W – 4 9 6 9 S C Z Z	PAPER SENSOR RELAY CABLE	1	BF
8	V R S – T S 2 A D 2 2 1 J	RESISTOR (1/10W 220Ω ±5%)[R221]	1	AA
9	V H P S G 2 0 6 S / / –1	PHOTO TRANSISTOR [PI1]	1	AG
10	Q S W – M 2 2 5 9 X H Z Z	COVER SWITCH [SW1]	1	AF
11	Q C N C M 2 5 7 5 S C 1 D	CONNECTOR (14PIN)[CNLIUA]	1	AC
12	V R D – H T 2 E Y 1 0 1 J	RESISTOR (1/4W 100Ω ±5%)[R20]	1	AA
13	V H P S G 2 0 6 S / / –1	PHOTO TRANSISTOR [P-IN]	1	AG
14	V H P S G 2 0 6 S / / –1	PHOTO TRANSISTOR [P-E]	1	AG
15	Q C N C W 2 5 0 9 S C 1 D	CONNECTOR (14PIN)[14PIN]	1	AF

2. Description

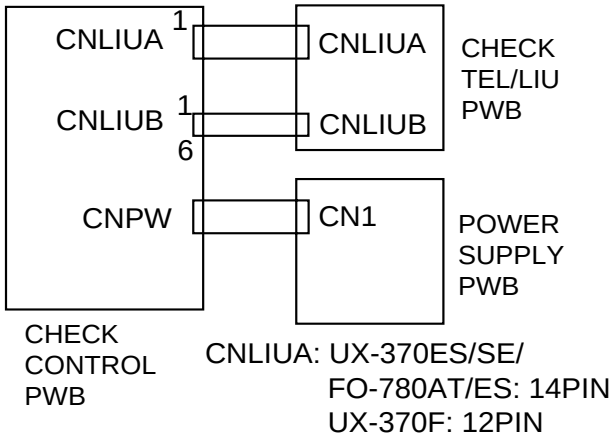
2-1. Relay board unit

1. Remove the TEL/LIU PWB, control PWB and Power Supply PWB from this unit, and mount the relay board unit instead.
   - Before connecting the wiring to the relay board unit, set the test PWB switches to the fixed position.
2. The setting is as follows.



Relay cable

- The relay cables are used as one pair.
- The cover swich and hook switch are manually operated.

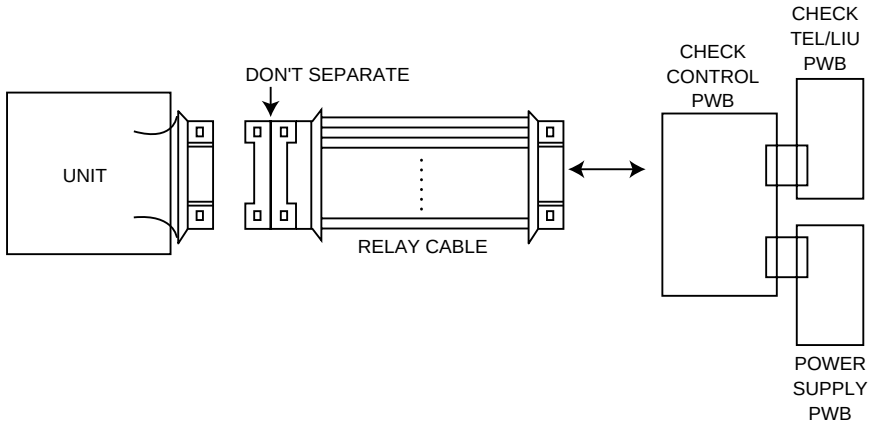


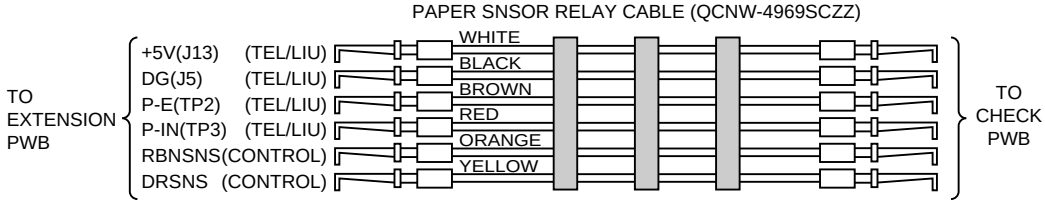
The recording paper sensor (P-E) and the hook switch are operated by OR of the mechanical unit switch and the test PWB switch. When performing installation in the machine unit, set the test PWB switches to the fixed position.

	Mechanical unit	PWB to be tested
	Actual operation with mechanical unit	
Recording paper sensor	ON/OFF operation	OFF (Photo interrupter is interrupted.)
Hook SW	ON/OFF operation	ON-HOOK
	PWB sensor check	
Recording paper sensor	OFF	ON/OFF operation
Hook SW	ON-HOOK	ON/OFF operation

* Recording paper: ON
No recording paper: OFF

NOTE





3. Shading paper

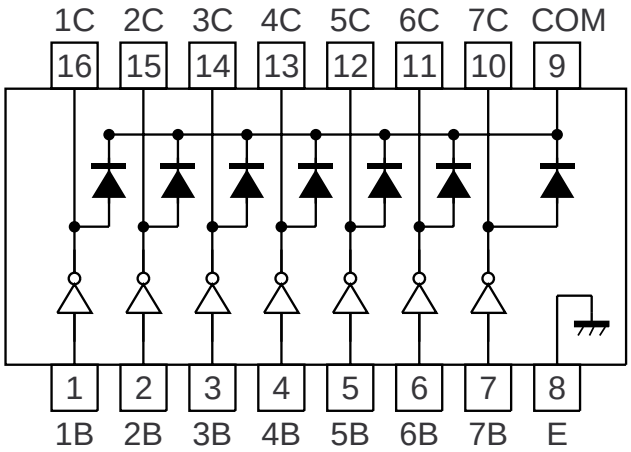
The white and black basis is applied to remember the shading waveform. Be sure to perform this operation when replacing the battery or replacing the control PWB. Execute in the shading mode of DIAG mode.

UX-300 SERIES SHADING WAVE MEMORY STANDARD PAPER (PSHEZ3354SCZZ)

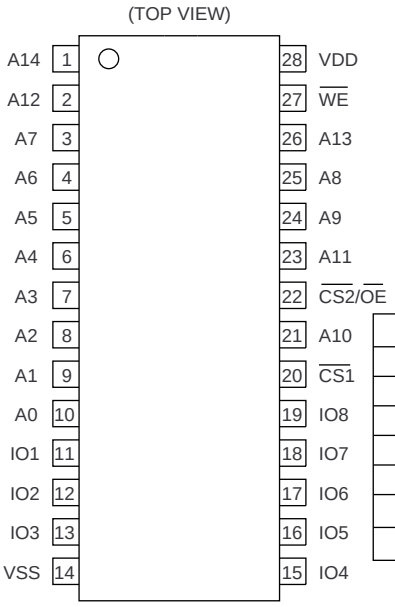
[2] IC signal name

CONTROL PWB UNIT

IC5: VHiULN2003ANS (ULN2003A)

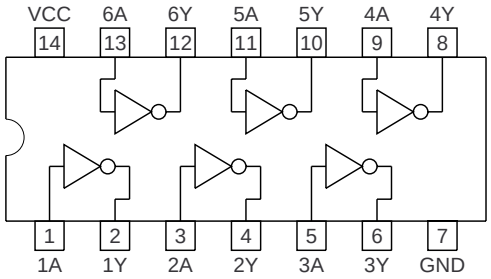


IC3: VHiW24258S7LE(W24258S-70LE)

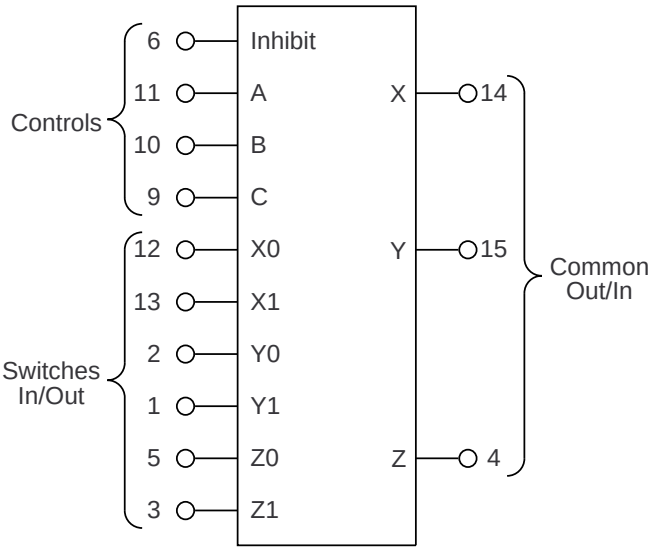


Pin name	Signal
A0~A14	Address input
$\overline{CS1}$/$\overline{CS2}$	Chip enable
$\overline{WE}$	Write enable
$\overline{OE}$	Write enable
I/O1~I/O8	Data I/O
VDD	Power source
VSS	Ground

IC7: VHiTC74HCU04F(TC74HCU04F)

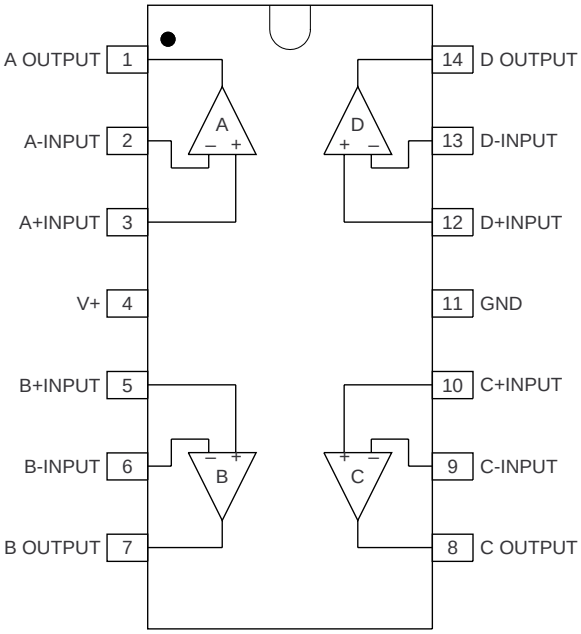


IC11: VHiHCF4053M1T (HCF4053B)

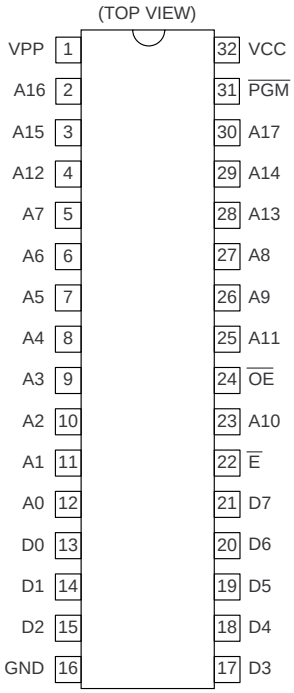


VDD: Pin 16
VSS: Pin 8
VEE: Pin7

IC12: VHiNJM2902M-1 (NJM2902M)



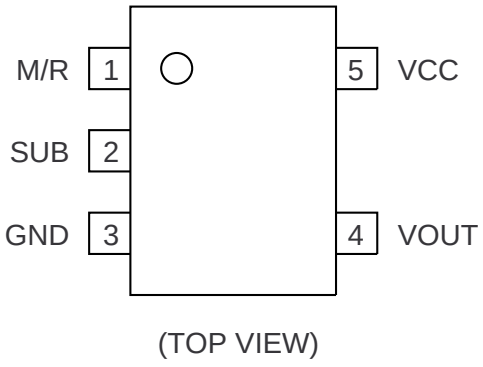
IC4: VHi27C20012MX (27C020)
ROM



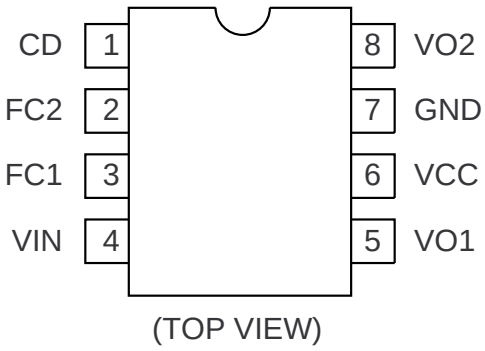
Pin name	Signal
A0~A17	Address input
$\overline{E}$	Chip enable
$\overline{OE}$	Output enable
GND	Ground
$\overline{PGM}$	Program
D0~D7	Data output (Program input)
VCC	+5V power
VPP	+12.5V power(*)

(*) Only in the program mode

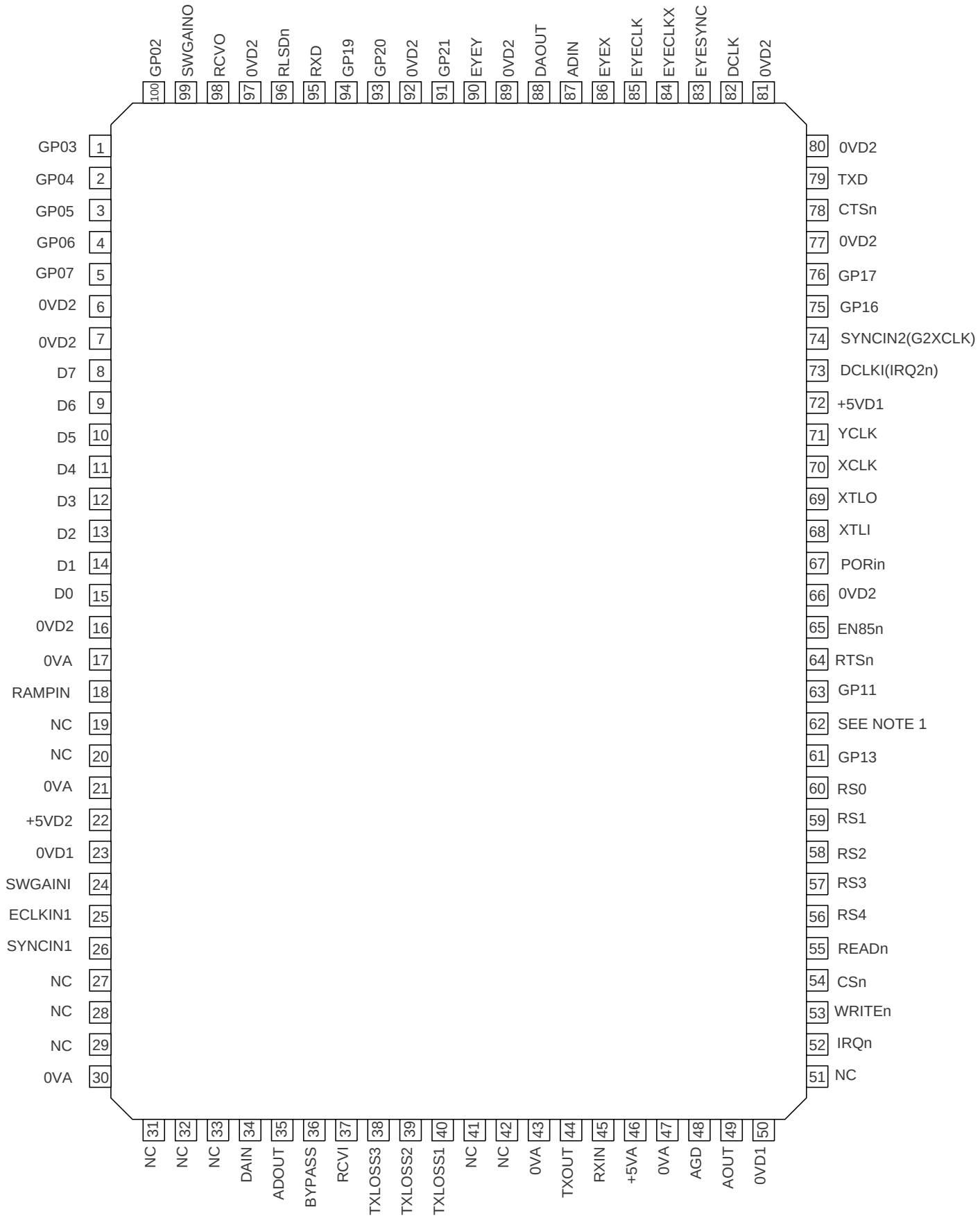
IC8: VHiPST596CMT1 (PST596CNR)



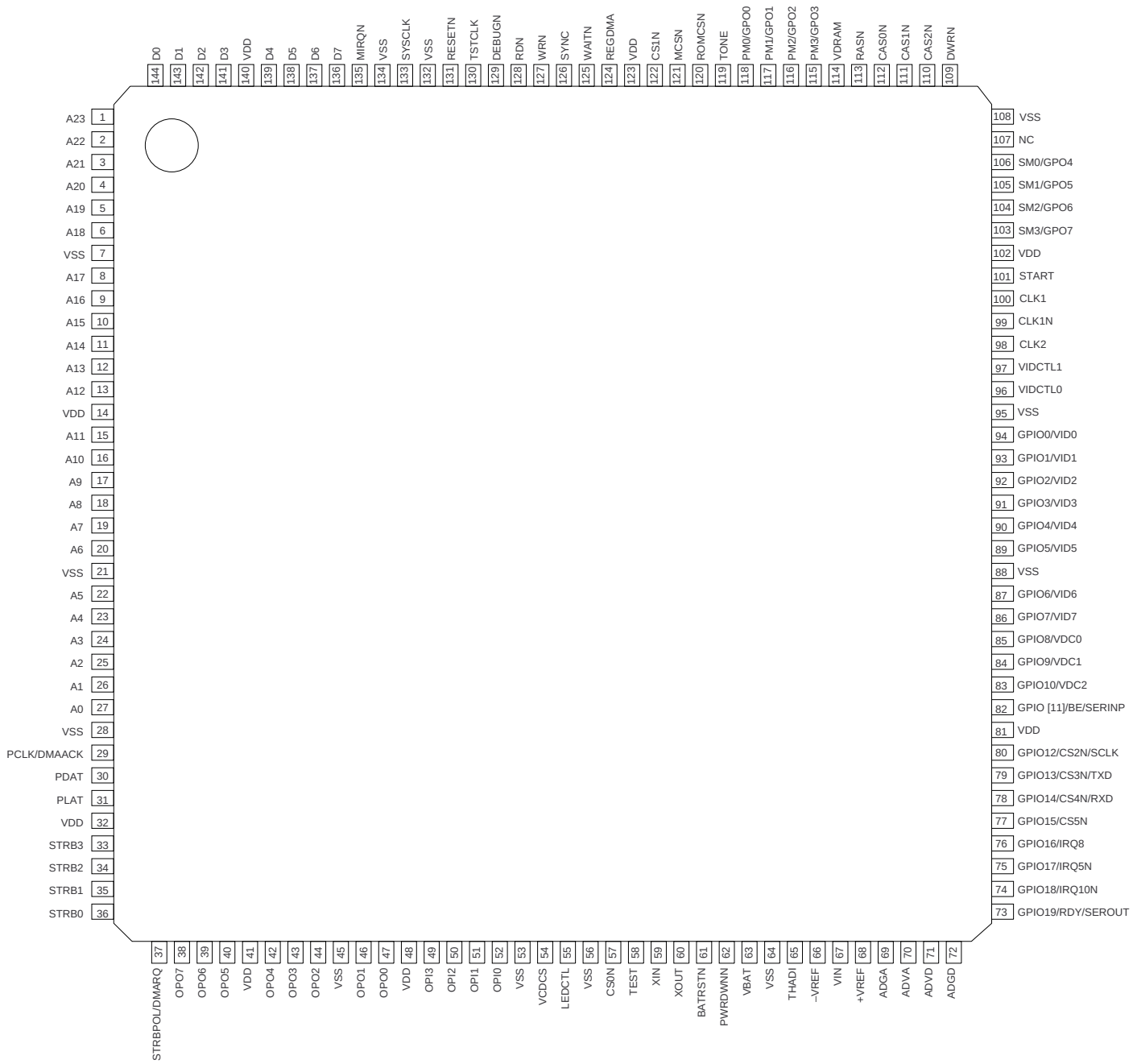
IC10: VHiMC34119DR2 (MC34119)



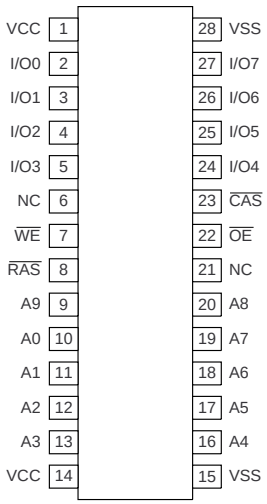
IC6: VHiR96CiDFC1M (R96DFXL-CID)



IC9: VHiR96CiDFC1M (FC100M)



IC1: RH-iX2129SCZZ (M514800C-70J)

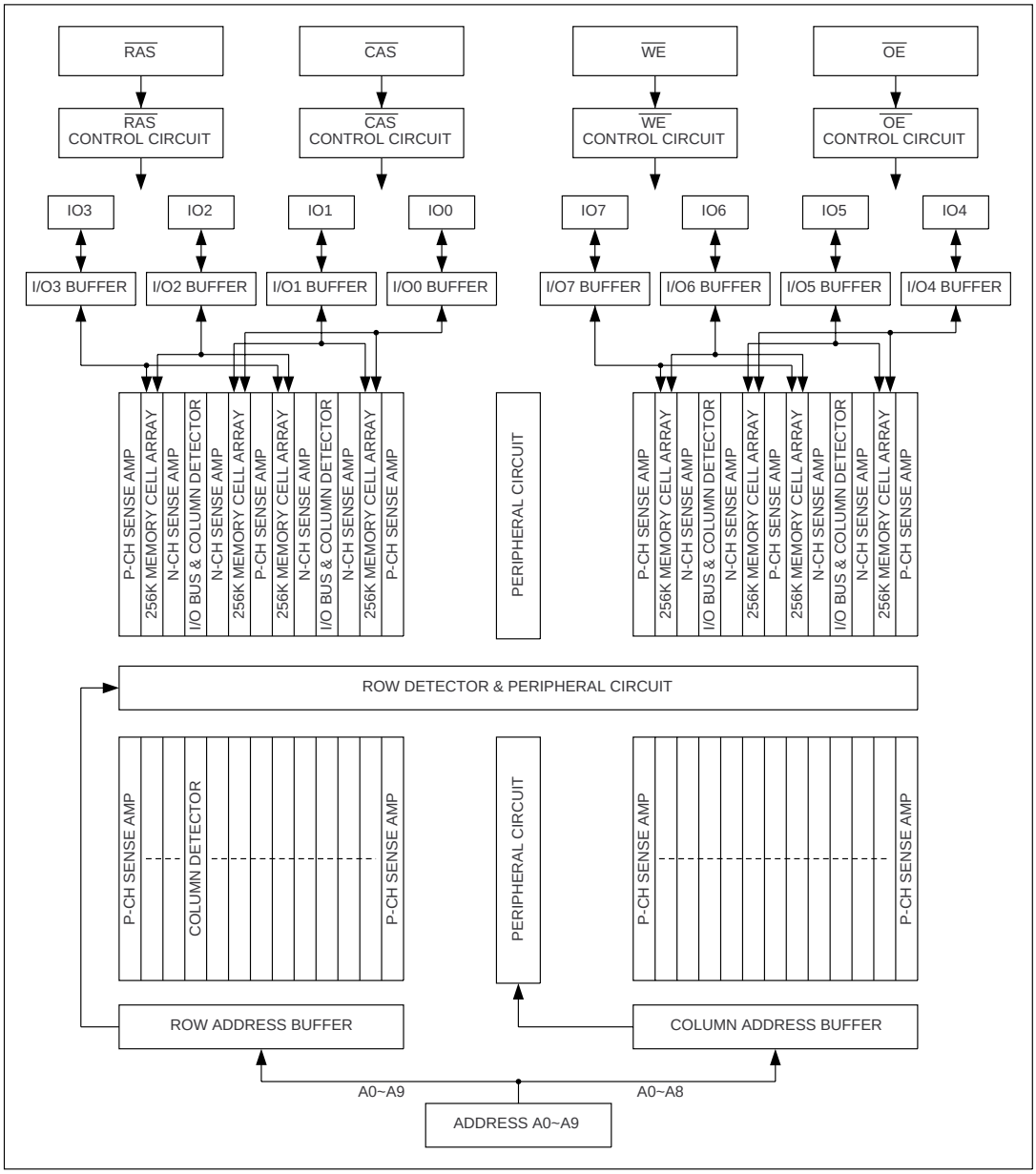


PIN DESCRIPTION

PIN	PIN NAME
A0~A9	ADDRESS INPUT (LOW/REFRESH A0~A3 COLUMN A0~A3)
I/O0~I/O7	DATA I/O
$\overline{RAS}$	LOW ADDRESS STROBE

PIN	PIN NAME
$\overline{CAS}$	COLUMN ADDRESS STROBE
$\overline{WE}$	READ/WRITE INPUT
$\overline{OE}$	OUTPUT ENABLE
VCC	POWER (+5V)
VSS	CONNECTION

BLOCK DIAGRAM



SHARP

PARTS GUIDE

MODEL UX-370 FO-780

SELECTION CODE	COUNTRY
UX-370ES/FO-780ES	Spain
UX-370SE	Sweden
UX-370F	France
FO-780AT	Austria

CONTENTS

1 Cabinet, etc.

2 Top cover and sub frame

3 Upper cabinet

4 Document guide upper

5 Drive unit

6 Packing material & Accessories

7 Control PWB unit

8 TEL-Liu PWB unit
(UX-370ES/SE/FO-780AT/ES)

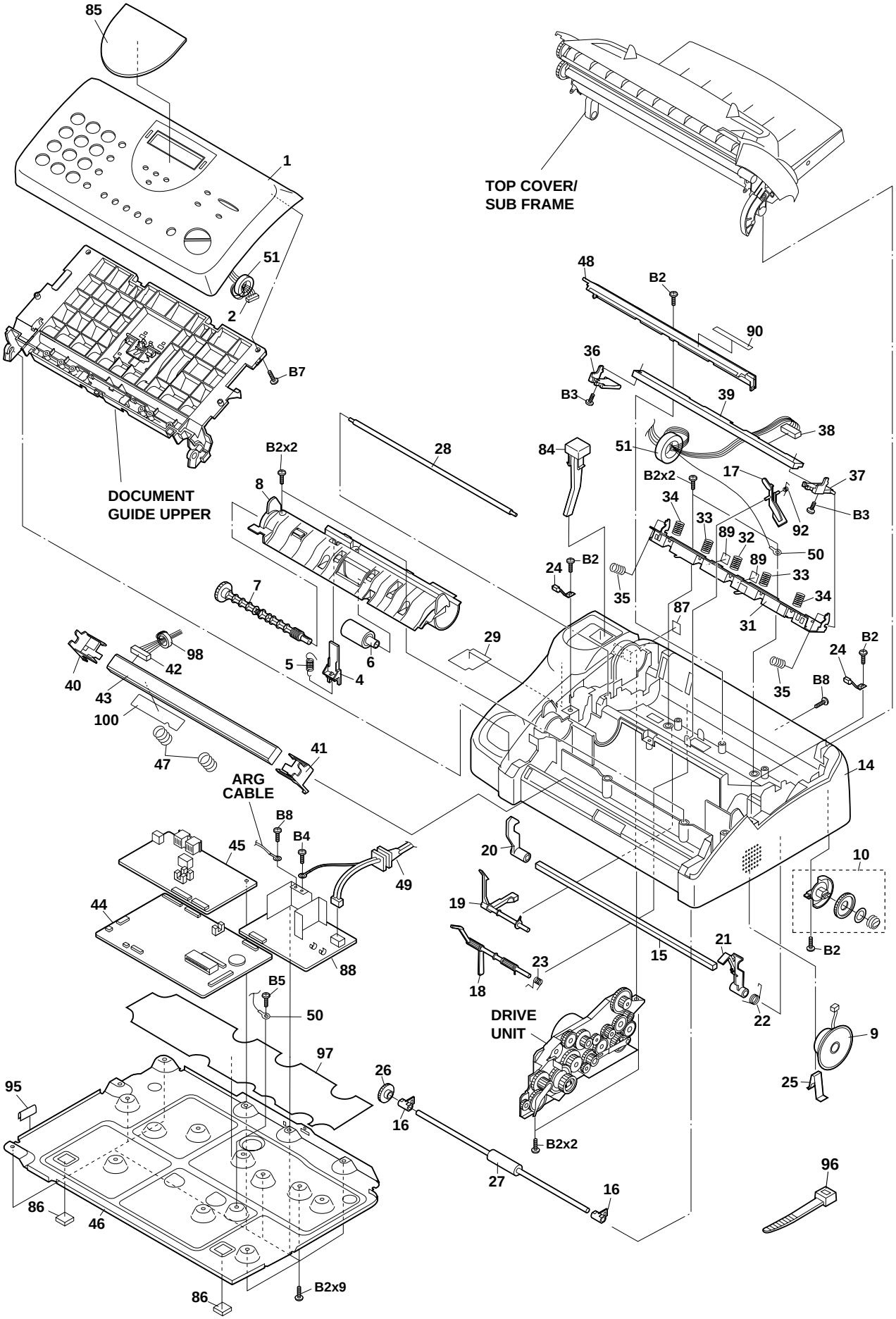
9 TEL-Liu PWB unit
(UX-370F)

10 Power supply PWB unit

■ Index

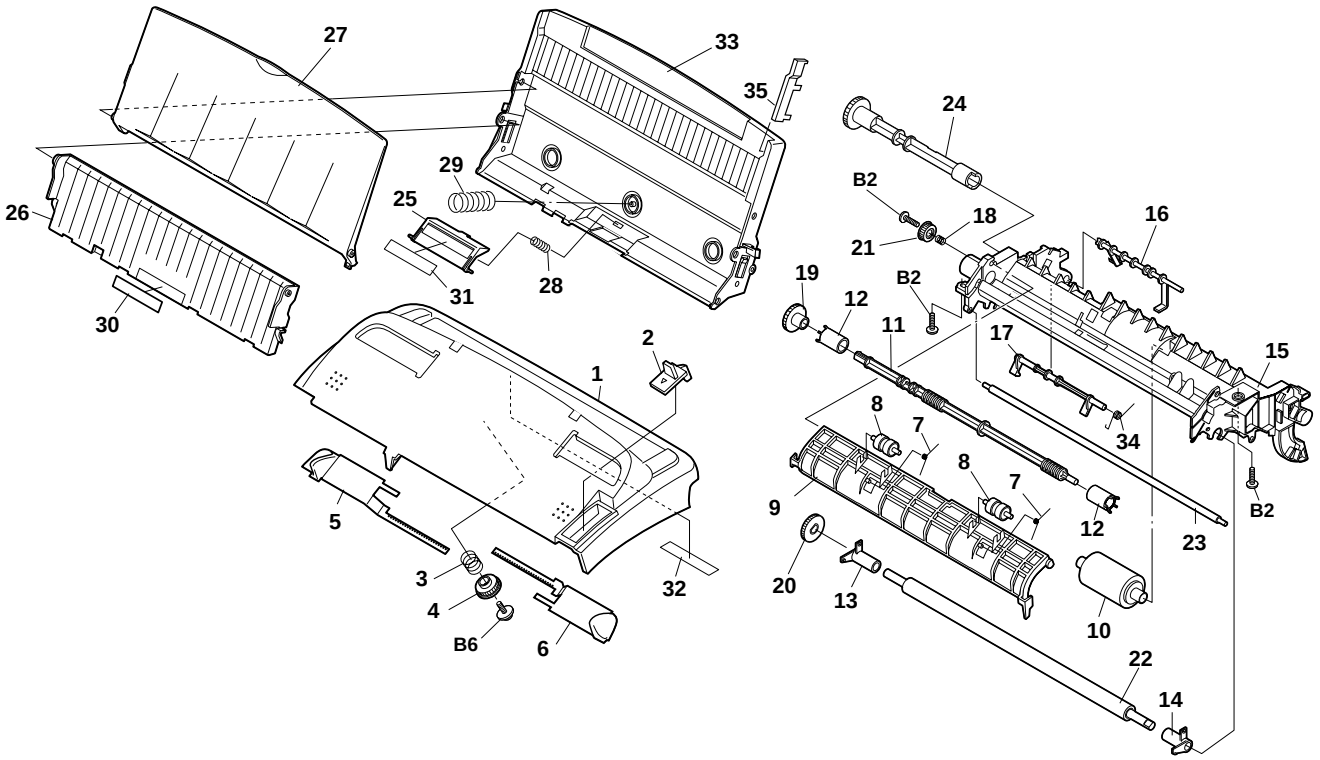
Because parts marked with "⚠" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specifi to the product specification.

[1] Cabinet, etc.



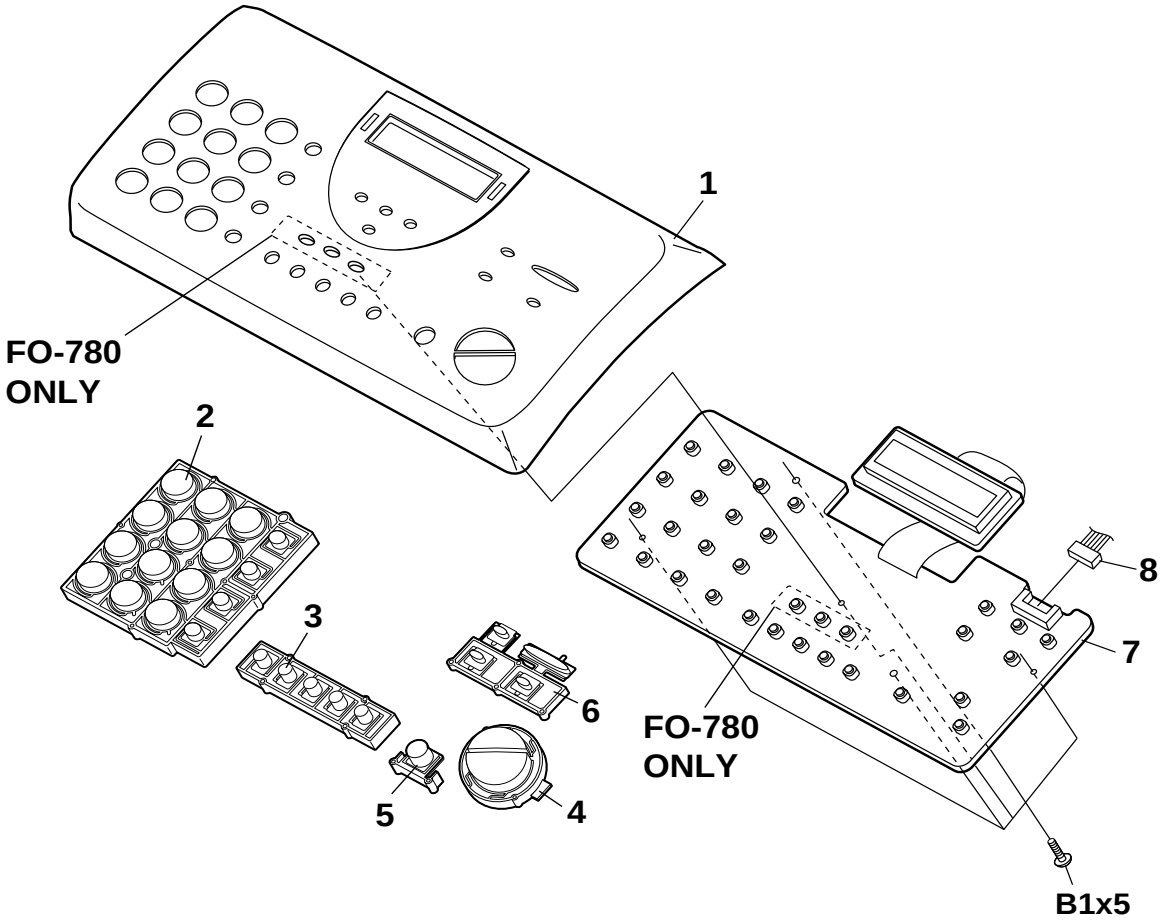
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[1] Cabinet,etc.						
1	DCEKP478BFF15		N	E	Operation panel unit	[370ES]
	DCEKP478BFF21		N	E	Operation panel unit	[370SE]
	DCEKP478BFF17		N	E	Operation panel unit	[370F]
	DCEKP478BFF19		N	E	Operation panel unit	[780AT]
	DCEKP478BFF16		N	E	Operation panel unit	[780ES]
2	QCNW-217AXHZZ		N	C	Panel cable	
4	MLEVP2297XHZZ	AC	N	C	Cover switch lever	
5	MSPRT3069FFFJ		N	C	Cover switch spring	
6	NROLR2375XHZZ	AL		C	Feed roller	
7	NSFTP2302XHZZ	AD	N	C	Feed roller shaft	
8	PGIDM2538XHZZ	AM	N	C	Original paper guide	
9	CCNW-202AFF01		N	C	Speaker ass'y	
10	CGERH2444XHY1	AF	N	C	BT gear ass'y	
14	GCABB2325FFSC		N	D	Lower cabinet	[370ES/SE/F]
	GCABB2325FFSE		N	D	Lower cabinet	[780AT/ES]
15	LANGF2817XHFW	AF	N	C	Platen lock bracket	
16	LBSHP2088AXZZ	AC		C	Transfer bearing	
17	MLEVP2290XHZZ	AC	N	C	Film sensor lever B	
18	MLEVP2292XHZZ	AD	N	C	PE sensor lever B	
19	MLEVP2294XHZZ	AD	N	C	P-IN sensor lever B	
20	MLEVP2295XHZZ	AD	N	C	Platen lock lever,left	
21	MLEVP2296XHZZ	AD	N	C	Platen lock lever,right	
22	MSPRD3082FFFJ		N	C	Platen lock spring	
23	MSPRD3073FFFJ		N	C	Sensor spring B	
24	MSPRP3054XHFJ	AD	N	C	Panel lock lever spring	
25	MSPRP3055XHFJ	AD	N	C	Speaker holder plate spring	
26	NGERH2445XHZZ	AB	N	C	Back roller gear	
27	NROLR2410XHZZ	AP	N	C	PO roller	
28	NSFTM2311XHZZ	AG	N	C	Film guide shaft	
29	PSHEZ3428XHZZ	AE	N	C	Sheet A	
31	LFRM-2198XHZZ	AK	N	C	Head frame	
32	MSPRC3103FFFJ		N	C	Head spring F	
33	MSPRC3059FFFJ		N	C	Head spring B	
34	MSPRC3102FFFJ		N	C	Head spring E	
35	MSPRC3061FFFJ		N	C	Head spring D	
36	PGIDM2531XHZZ	AD	N	C	Head guide,left	
37	PGIDM2532XHZZ	AD	N	C	Head guide,right	
38	QCNW-4936XHZZ	AN	N	C	Head cable	
39	RHEDZ2058XHZZ	BR	N	B	Thermal head	
40	PGIDM2529XHZZ	AD	N	C	CIS guide,left	
41	PGIDM2530XHZZ	AD	N	C	CIS guide,right	
42	QCNW-4850XHZZ	AG		C	CIS cable	
43	RUNTZ2037XHZZ	BL	N	B	CIS unit	
44	CPWBS3026FF04		N	E	Control PWB unit(Without ROM)	[370ES/780ES]
	CPWBS3026FF05		N	E	Control PWB unit(Without ROM)	[370SE/780AT]
	CPWBS3026FF03		N	E	Control PWB unit(Without ROM)	[370F]
45	DCEKL457BFF06		N	E	TEL-Liu PWB unit	[370ES/780ES]
	DCEKL457BFF09		N	E	TEL-Liu PWB unit	[370SE]
	DCEKL459BFF02		N	E	TEL-Liu PWB unit	[370F]
	DCEKL457BFF08		N	E	TEL-Liu PWB unit	[780AT]
46	LPLTM2995XHFW	AS	N	C	Bottom plate	
47	MSPRC3057FFFJ		N	C	CIS spring	
48	PCOVP2122XHZZ	AK	N	C	Head cover	
49	QACCE2013BMZZ			B	AC cord ass'y	
50	QCNW-4971XHZZ	AD	N	C	Head earth cable	
⚠ 51	RCORF2064XHZZ	AF		B	Core(TRA31)	
84	MLEVP2302XHZZ	AC	N	C	Hook switch lever	
85	HPNLH2389XHSQ		N	D	Decoration panel	[370ES]
	HPNLH2389XHSN	AV	N	D	Decoration panel	[370SE]
	HPNLH2389XHSP		N	D	Decoration panel	[370F]
	HPNLH2389XHSS		N	D	Decoration panel	[780AT]
	HPNLH2389XHSV		N	D	Decoration panel	[780ES]
86	GLEGG2068FFZZ			C	Rubber leg	
87	PSHEZ3410FFZZ		N	C	Jack sheet	
⚠ 88	RDENT2137XHZZ	BL	N	E	Power supply PWB unit	
89	PCUSS2120XHZZ	AB	N	C	Head cushion	
90	PSHEZ3429XHZZ	AD	N	C	Head guide sheet	
92	MSPRD3104FFFJ		N	C	Film sensor lever spring	
95	PSHEZ3432XHZZ	AE	N	C	Bottom plate sheet	
96	LHLDW1033CE00	AA		C	Band	
97	PSHEZ3425XHZZ	AL	N	C	Shield sheet	
⚠ 98	RCORF2063XHZZ	AF		B	Core(TRA20)	
100	PSHEZ3436XHZZ	AC	N	C	CIS protect sheet	
B2	XEBSD30P10000	AA		C	Screw(3x10)	
B3	XBBSD30P06000	AA		C	Screw(3x6)	
B4	XBPSN40P06K00	AA		C	Screw(4x6)	
B5	XHBSD30P05000	AA		C	Screw(3x5)	
B7	XEBSD30P08000	AA		C	Screw(3x8)	
B8	XBPSD30P06K00	AA		C	Screw(3x6)	

[2] Top cover and sub frame



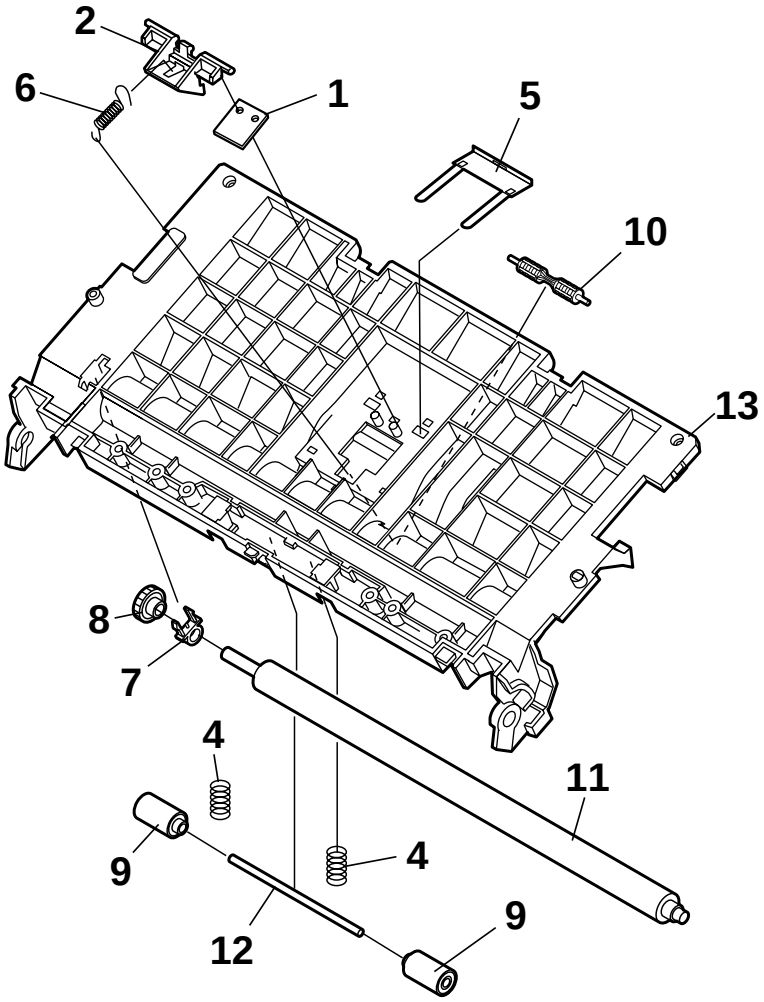
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[2] Top cover and sub frame						
1	GCOVA2403FFSC		N	C	Top cover	[370ES/SE/F]
	GCOVA2403FFSA		N	C	Top cover	[780AT/ES]
2	JKNBP2091XHZZ	AC	N	C	Release knob	
3	MSPRC2832FFZZ			C	Hopper spring	
4	NGERP2318XHZZ	AD		C	Pinion gear	
5	PGIDM2533XHSC	AD	N	C	Hopper guide,left	[370ES/SE/F]
	PGIDM2533XHSA	AD	N	C	Hopper guide,left	[780AT/ES]
6	PGIDM2534XHSC	AD	N	C	Hopper guide,right	[370ES/SE/F]
	PGIDM2534XHSA	AD	N	C	Hopper guide,right	[780AT/ES]
7	MSPRD3065FFFJ		N	C	PO pinch roller spring	
8	NROLP2332XHZZ	AD		C	PO pinch roller	
9	PGIDM2537XHZZ	AF	N	C	PO guide	
10	CROLR2407XH01	AN	N	C	PU roller ass'y	
11	NROLR2408XHZZ	AD	N	C	PO roller	
12	PGUMR2160XHZZ	AE	N	C	PO roller rubber	
13	LBSHP2104XHZZ	AC	N	C	Platen bearing,left	
14	LBSHP2105XHZZ	AC	N	C	Platen bearing,right	
15	LFRM-2199XHZZ	AK	N	C	Sub frame	
16	MLEVP2291XHZZ	AD	N	C	PE sensor lever	
17	MLEVP2293XHZZ	AD	N	C	P-IN sensor lever	
18	MSPRC3064FFFJ		N	C	Tension spring	
19	NGERH2441XHZZ	AC	N	C	PO gear	
20	NGERH2442XHZZ	AC	N	C	Platen gear	
21	NGERH2460XHZZ	AC	N	C	Tension gear	
22	NROLR2409XHZZ	AW	N	C	Platen roller	
23	NSFTM2311XHZZ	AG	N	C	Film guide shaft	
24	NSFTP2304XHZZ	AD	N	C	PU shaft	
25	LPLTP2997XHZZ	AD	N	C	Separate plate	
26	LPLTP2998XHZZ	AF	N	C	Rotation plate	
27	LPLTP3001XHSC	AF	N	C	RP release plate	[370ES/SE/F]
	LPLTP3001XHSA	AH	N	C	RP release plate	[780AT/ES]
28	MSPRC3062XHFJ	AB	N	C	Separate spring	
29	MSPRC3063XHFJ	AC	N	C	C-spring	
30	PSEL-2015SCZZ	AB		C	RP pad	
31	PSHEZ3293XHZZ	AH	N	C	Separate plate sheet	
32	PSHEZ3431FFZZ		N	C	TC sheet	
33	PHOP-2101XHSC	AH	N	C	RP hopper	[370ES/SE/F]
	PHOP-2101XHSA	AK	N	C	RP hopper	[780AT/ES]
34	MSPRD3105FFFJ		N	C	P-IN sensor lever spring	
35	PGIDM2535XHSC	AC	N	C	A4 paper guide	[370ES/SE/F]
	PGIDM2535XHSA	AC	N	C	A4 paper guide	[780AT/ES]
B2	XEBSD30P10000	AA		C	Screw(3x10)	
B6	LX-BZ2138XHZZ	AB		C	Screw	

[3] Upper cabinet



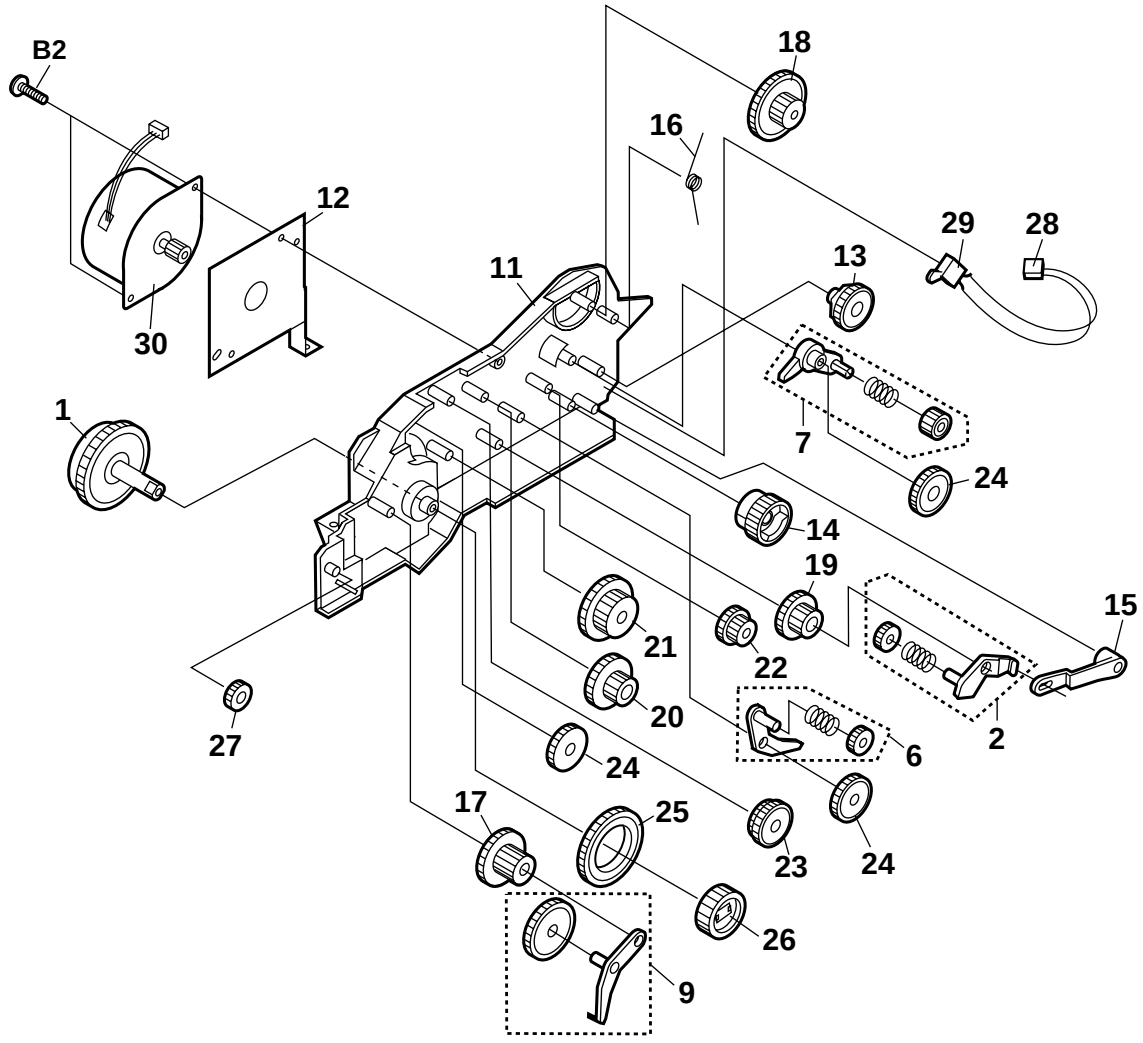
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[3] Upper cabinet						
1	GCABA2324XHSS		N	D	Upper cabinet	[370ES]
	GCABA2324XHSQ		N	D	Upper cabinet	[370SE]
	GCABA2324XHSR		N	D	Upper cabinet	[370F]
	GCABA2324XHST		N	D	Upper cabinet	[780AT]
	GCABA2324XHSW		N	D	Upper cabinet	[780ES]
2	JBTN-2242XHSC	AG	N	C	12 key	[370ES/SE/F]
	JBTN-2242XHSA	AG	N	C	12 key	[780AT/ES]
3	JBTN-2243XHSC	AD	N	C	Direct key	[370ES/SE/F]
	JBTN-2252XHSA	AE	N	C	Direct key	[780AT/ES]
4	JBTN-2244XHSA	AD	N	C	Start key	
5	JBTN-2245XHSA	AD	N	C	Stop key	
6	JBTN-2246XHSC	AD	N	C	Mode key	[370ES/SE/F]
	JBTN-2246XHSA	AD	N	C	Mode key	[780AT/ES]
7	DCEKP450BXHG1		N	E	Operation panel PWB unit	[370ES/SE/F]
	DCEKP450BXHG2		N	E	Operation panel PWB unit	[780AT/ES]
8	QCNW-217AXHZZ		N	C	Panel cable	
B1	XEBSD20P06000	AA		C	Screw(2x6)	
	(Unit)					
901	DCEKP478BFF15		N	E	Operation panel unit	[370ES]
	DCEKP478BFF21		N	E	Operation panel unit	[370SE]
	DCEKP478BFF17		N	E	Operation panel unit	[370F]
	DCEKP478BFF19		N	E	Operation panel unit	[780AT]
	DCEKP478BFF16		N	E	Operation panel unit	[780ES]

[4] Document guide upper



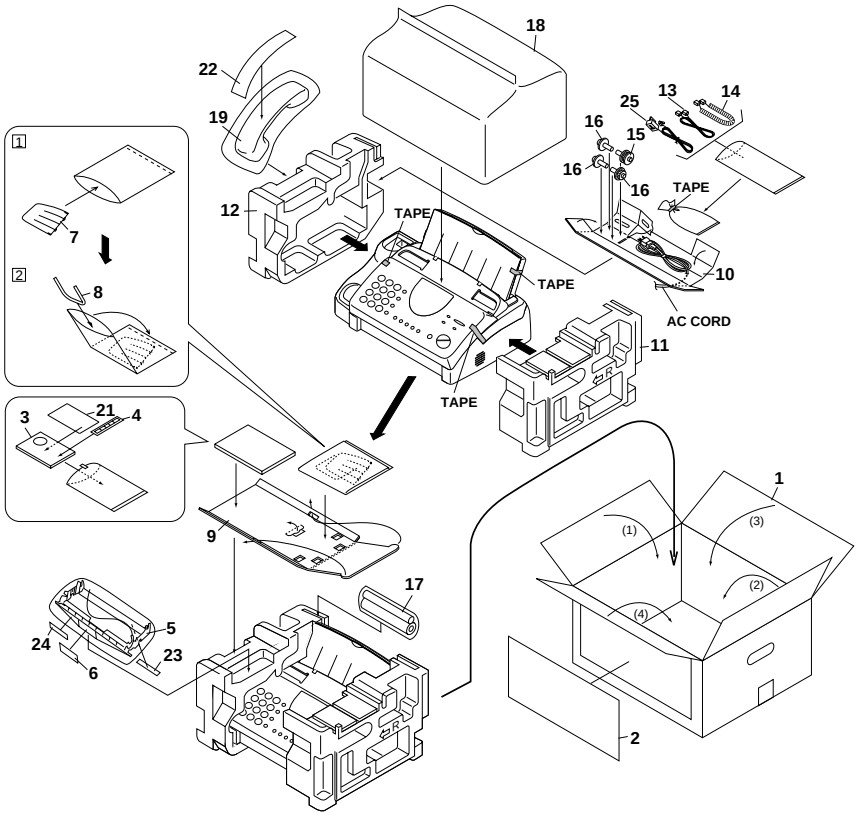
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[4] Document guide upper					
1	LPLTG2911XHZZ	AE		C	Separator rubber
2	LPLTP2908XHZZ	AE		C	Separator plate
4	MSPRC3071FFFJ		N	C	Pinch roller spring
5	MSPRP3079XHFJ	AE	N	C	Paper feed spring
6	MSPRT2951FFZZ		N	C	Separate spring
7	NBRGP2141XHZZ	AH		C	Transfer bearing
8	NGERH2445XHZZ	AB	N	C	Back roller gear
9	NROLP2334XHZA	AC		C	Pinch roller
10	NROLP2406XHZZ	AD	N	C	Guide roller
11	NROLR2411XHZZ	AV	N	C	Back roller
12	NSFTZ2257XHZZ	AG		C	Pinch roller shaft
13	PGIDM2536FFZZ		N	C	Document guide upper

[5] Drive unit



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[5] Drive unit					
1	CGERH2459XH01	AM	N	C	Slip gear ass'y
2	CLEVP2298XH01	AC	N	C	Planet gear lever A ass'y
6	CLEVP2299XH01	AC	N	C	Planet gear lever B ass'y
7	CLEVP2300XH01	AC	N	C	Planet gear lever C ass'y
9	CLEVP2303XH01	AC	N	C	Planet gear lever D ass'y
11	LFRM-2200XHZZ	AB	N	C	Drive frame
12	LPLTM2994XHFW	AE	N	C	Motor plate
13	MCAMP2025XHZZ	AB	N	C	Cam A
14	MCAMP2026XHZZ	AB	N	C	Cam B
15	MLEVP2301XHZZ	AB	N	C	Link lever
16	MSPRD3070XHFJ	AB	N	C	Cam hold spring
17	NGERH2280XHZZ	AC		C	Idler gear B
18	NGERH2311XHZZ	AD		C	Reduction gear C
19	NGERH2446XHZZ	AB	N	C	Reduction gear,1
20	NGERH2447XHZZ	AB	N	C	Reduction gear,2
21	NGERH2448XHZZ	AB	N	C	Reduction gear,3
22	NGERH2449XHZZ	AB	N	C	Reduction gear,4
23	NGERH2450XHZZ	AB	N	C	Reduction gear,5
24	NGERH2451XHZZ	AB	N	C	Idler gear,30Z
25	NGERH2452XHZZ	AB	N	C	Idler gear,52Z
26	NGERH2454XHZZ	AB	N	C	Take up gear
27	NGERH2461XHZZ	AB	N	C	Reduction gear,6
28	QCNW-4933XHZZ	AC	N	C	Cam switch cable
29	QSW-F2224SCZZ	AE		B	Cam switch
30	RMOTZ2145XHZZ	BA	N	B	Motor
B2	XEBSD30P10000	AA		C	Screw(3x10)

[6] Packing material & Accessories



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[6] Packing material & Accessories						
1	SPAKC031BFFZZ		N	D	Packing case	[370ES/SE/F]
	SPAKC052BFFZZ		N	D	Packing case	[780AT/ES]
2	TLABM4972FFZZ		N	D	Box label	[370ES/SE/F]
	TLABM4928FFZZ		N	D	Box label	[780AT/ES]
3	TINSS3977FFZZ		N	D	Operation manual	[370ES/780ES]
	TINSW3975FFZZ		N	D	Operation manual	[370SE]
	TINSF3976FFZZ		N	D	Operation manual	[370F]
	TINSG3974FFZZ		N	D	Operation manual	[780AT]
4	TLABH4751FFZZ		N	D	Rapid key labels	[370ES/SE]
	TLABH4938FFZZ		N	D	Rapid key labels	[370F]
	TLABH4880FFZZ		N	D	Rapid key labels	[780AT]
	TLABH4811FFZZ		N	D	Rapid key labels	[780ES]
5	CPLTP3002FFB1		N	E	Imaging film cartridge and label ass'y	[370ES/SE/780ES]
	CPLTP3002FFB7		N	E	Imaging film cartridge and label ass'y	[370F]
	CPLTP3002FFB2		N	E	Imaging film cartridge and label ass'y	[780AT]
6	TLABH4752FFZZ		N	D	Film set label	
7	LPLTP3003XHSA	AH	N	C	Paper tray extension	
8	PHOP-2102XHZZ	AE	N	C	Original document support	
9	SPAKA490AFFZZ		N	D	Pad B	
10	SPAKA489AFFZZ		N	D	Pad A	
11	SPAKA481AFFZZ		N	D	Packing add.,right	
12	SPAKA480AFFZZ		N	D	Packing add.,left	
13	QCNW-4416FFZZ			C	Telephone line cord	[370ES/780ES]
14	QCNW-3976XHBG	AK	N	C	Handset cord	[370ES/SE/F]
	QCNW-3976XHOW	AK		C	Handset cord	[780AT/ES]
15	NGERH2455XHZZ	AD	N	C	Imaging film gear A	
16	NGERH2456XHZZ	AC	N	C	Imaging film gear B	
17	PRBNN2015SCZZ	AQ	N	S	Imaging film(Initial starter roll 10m)	
18	SPAKP3386FFZZ		N	D	Vinyl cover	
19	DUNTK419BFFBG		N	E	Handset	[370ES/SE/F]
	DUNTK419BFFWH		N	E	Handset	[780AT/ES]
21	TCADZ2796FFZZ		N	D	PTT aproval card	[370ES]
	TCADZ2797FFZZ		N	D	PTT aproval card	[780ES]
22	TLABM231AFFZZ		N	D	Pop label	[370ES]
	TLABM230AFFZZ		N	D	Pop label	[370SE]
	TLABM229AFFZZ		N	D	Pop label	[780AT]
	TLABM232AFFZZ		N	D	Pop label	[780ES]
23	TLABH218AFFZZ		N	D	Caution label 1	[370F]
	TLABH4835FFZZ		N	D	Caution label 1	[780AT]
24	TLABH219AFFZZ		N	D	Caution label 2	[370F]
	TLABH4899FFZZ		N	D	Caution label 2	[780AT]
25	QCNW-3914BTZZ			C	Telephone line cord	[370F]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[7] Control PWB unit					
1	UBATL2049SCZZ	AF		B	Battery(CR2032T23) [BAT1]
2	VCEAGA1EW476M	AA		C	Capacitor(25WV 47µF) [C1]
3	VCEAGA1HW105M	AB		C	Capacitor(50WV 1µF) [C2]
4	VCEAGA1EW476M	AA		C	Capacitor(25WV 47µF) [C3]
5	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF) [C4]
6	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF) [C5]
7	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF) [C6]
8	VCEAGA1HW107M	AA		C	Capacitor(50WV 100µF) [C7]
9	VCEAGA1EW476M	AA		C	Capacitor(25WV 47µF) [C8]
10	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C100]
11	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF) [C103]
12	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C104]
13	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C105]
14	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C106]
15	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF) [C107]
16	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF) [C109]
17	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C110]
18	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C111]
19	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C112]
20	VCCCTV1HH150J	AA		C	Capacitor(50WV 15PF) [C113]
21	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C115]
22	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C116]
23	VCCCTV1HH150J	AA		C	Capacitor(50WV 15PF) [C117]
24	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C118]
25	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF) [C120]
26	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C121]
27	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C122]
28	VCCCTV1HH180J	AA		C	Capacitor(50WV 18PF) [C123]
29	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C124]
30	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01µF) [C125]
31	VCCSTV1HL391J	AA		C	Capacitor(50WV 390PF) [C126]
32	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C128]
33	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C129]
34	VCCCTV1HH150J	AA		C	Capacitor(50WV 15PF) [C130]
35	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C131]
36	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C132]
37	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C133]
38	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C134]
39	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1µF) [C135]
40	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C136]
41	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C137]
42	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C138]
43	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C140]
44	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C141]
45	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF) [C142]
46	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C143]
47	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C144]
48	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C145]
49	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C146]
50	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C147]
51	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C148]
52	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF) [C149]
53	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C150]
54	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C151]
55	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C152]
56	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C153]
57	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C154]
58	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C155]
59	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1µF) [C156]
60	VCKYTV1HB221K	AA		C	Capacitor(50WV 220PF) [C157]
61	VCKYTV1HB472K	AA		C	Capacitor(50WV 4700PF) [C158]
62	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01µF) [C159]
63	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1µF) [C160][370ES/SE/780AT/ES]
64	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C161]
65	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF) [C162]
66	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C163]
67	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C164]
68	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C165]
69	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C166]
70	VCCCTV1HH220J	AA		C	Capacitor(50WV 22PF) [C167]
71	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C168]
72	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C169]
73	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C170]
74	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C171]
75	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C172]
76	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF) [C173]
77	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C174]
78	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C175]
79	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF) [C176]
80	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF) [C177][370ES/SE/780AT/ES]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[7] Control PWB unit						
81	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF)	[C178]
82	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF)	[C179]
83	VCCSTV1HL102J	AA		C	Capacitor(50WV 1000PF)	[C180][370ES/SE/780AT/ES]
84	VCKYTV1HB681K	AA		C	Capacitor(50WV 680PF)	[C181]
85	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF)	[C182][370ES/SE/780AT/ES]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[C182][370F]
87	VCCSTV1HL102J	AA		C	Capacitor(50WV 1000PF)	[C183]
88	VCKYTQ1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C184]
89	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF)	[C185]
90	VCCCTV1HH220J	AA		C	Capacitor(50WV 22PF)	[C186]
91	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF)	[C187]
92	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF)	[C188]
93	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C189]
94	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C190]
95	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF)	[C191]
96	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF)	[C192]
97	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C193]
98	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[C194]
99	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C195]
100	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1µF)	[C196]
101	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C197]
102	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF)	[C198]
103	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C199]
104	VCKYTQ1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C200]
105	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C201]
106	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF)	[C203]
107	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C204]
108	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C205]
109	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C206]
110	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C207]
111	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C208]
112	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C209]
113	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C210]
114	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C211]
115	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C212]
116	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF)	[C213]
117	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF)	[C214]
118	VCCCTV1HH680J	AA		C	Capacitor(50WV 68PF)	[C215]
119	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C217]
120	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C218]
121	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C223]
122	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C224]
123	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C225]
124	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C226]
125	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C227]
126	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C228]
127	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C229]
128	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C230]
129	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C231]
130	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C233]
131	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C235]
132	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C236]
133	QCNCM7014SC0G	AB		C	Connector(7pin)	[CNCIS]
134	QCNCM2442SC0B	AB		C	Conector(2pin)	[CNCSW]
135	QCNCM2575SC1D	AC	N	C	Connector(14pin)	[CNLIUA][370ES/SE/780AT/ES]
	QCNCM2575SC1B	AF	N	C	Conector(12pin)	[CNLIUA][370F]
137	QCNCM2575SC0F	AE	N	C	Connector(6pin)	[CNLIUB]
138	QCNCM7014SC0F	AB		C	Connector(6pin)	[CNMT]
139	QCNCM7014SC1E	AC		C	Connector(15pin)	[CNPN]
140	QCNCM2575SC0I	AF	N	C	Connector(9pin)	[CNPW]
141	QCNCM2401SC0B	AA		C	Connector(2pin)	[CNSP]
142	QCNCM7014SC1F	AD		C	Connector(16pin)	[CNTH]
143	VHEMPZP4748A1	AA		B	Diode(MPZP4748)	[D2]
144	VHDRB705D//-1	AD		B	Diode(RB705D)	[D102]
145	VHD1SS355//-1	AB		B	Diode(1SS355)	[D104]
146	VHD1SS355//-1	AB		B	Diode(1SS355)	[D105]
147	VHVICPS07//-1	AA		B	IC protector(ICP-S07)	[FU100]
148	RH-IX2129SCZZ	AY		B	IC(M514800C-70J)	[IC1]
149	VHIW24258S7LE	AQ	N	B	IC(W24258S-70LE)	[IC3]
150	QSOCZ0115SC32	AC	N	C	IC socket(32pin)	[IC4]
	VHI27020FLL0B		N	B	IC,EPROM(2MB)	[IC4][370ES]
	VHI27020FML0B		N	B	IC,EPROM(2MB)	[IC4][370SE]
	VHI27020FLW0D		N	B	IC,EPROM(2MB)	[IC4][370F]
	VHI27020FMG0B		N	B	IC,EPROM(2MB)	[IC4][780AT]
	VHI27020FLM0C		N	B	IC,EPROM(2MB)	[IC4][780ES]
154	VHIULN2003ANS	AE		B	IC(ULN2003A)	[IC5]
155	VHIR96CIDFC1M	BN	N	B	IC(R96DFXL-CID)(Within IC6 and IC9 pair)	[IC6]
156	VHITC74HCU04F	AE	N	B	IC(HCU04)	[IC7]
157	VHIPST596CMT1	AF		B	IC(PST596CNR)	[IC8]
158	VHIR96CIDFC1M	BN	N	B	IC(FC100M)(Within IC6 and IC9 pair)	[IC9]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[7] Control PWB unit						
159	VHIMC34119DR2	AH		B	IC(MC34119)	[IC10]
160	VHIHCF4053M1T	AG		B	IC(HCF4053B)	[IC11]
161	VHINJM2902M-1	AF		B	IC(NJM2902M)	[IC12]
162	VRS-TS2AD121J	AA		C	Resistor(1/10W 120Ω ±5%)	[L100]
163	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[L101]
164	RCILZ2145XHZZ	AF		C	Coil(Z2145)	[L102]
165	RCILZ2145XHZZ	AF		C	Coil(Z2145)	[L103]
166	RCILZ2104SCZZ	AK		C	Coil(Z2104)	[L104]
167	RCILZ2145XHZZ	AF		C	Coil(Z2145)	[L105]
168	RCILZ2145XHZZ	AF		C	Coil(Z2145)	[L106]
169	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[L107]
170	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[L108]
171	VHPSG206S//-1	AG		B	Photo transistor(SG206S)	[PI1]
172	VS2SA1037KS-1	AB		B	Transistor(2SA1037KS)	[Q101]
173	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q104]
174	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q105]
175	VSDTD114EK/-1	AC		B	Transistor(DTD114EK)	[Q109]
176	VS2SA1037KS-1	AB		B	Transistor(2SA1037KS)	[Q111]
177	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R100]
178	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R102]
179	VRS-TS2AD512J	AA		C	Resistor(1/10W 5.1KΩ ±5%)	[R103]
180	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R104]
181	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R105]
182	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R106]
183	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R109]
184	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R110]
185	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R111]
186	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R112]
187	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R113]
188	VRS-TS2AD393J	AA		C	Resistor(1/10W 39KΩ ±5%)	[R114]
189	VRS-TS2AD393J	AA		C	Resistor(1/10W 39KΩ ±5%)	[R115]
190	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R117]
191	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R118]
192	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R119]
193	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R120]
194	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R121]
195	VRS-TS2AD105J	AA		C	Resistor(1/10W 1.0MΩ ±5%)	[R122]
196	VRS-TS2AD201J	AG		C	Resistor(1/10W 200Ω ±5%)	[R125]
197	VRS-TS2AD121J	AA		C	Resistor(1/10W 120Ω ±5%)	[R126]
198	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R127]
199	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R128]
200	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R129]
201	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R130]
202	VRS-TS2AD680J	AA		C	Resistor(1/10W 68Ω ±5%)	[R131]
203	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R132]
204	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R133]
205	VRS-TS2AD562J	AA		C	Resistor(1/10W 5.6KΩ ±5%)	[R134]
206	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R136]
207	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R137]
208	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[R138]
209	VRSTS2AD4752F	AA		C	Resistor(1/10W 47.5KΩ ±1%)	[R139]
210	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R140]
211	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[R141]
212	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R142]
213	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R143]
214	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R144]
215	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%)	[R145]
216	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%)	[R146]
217	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R147]
218	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R148]
219	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R149]
220	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R151]
221	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R152]
222	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R153]
223	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R154]
224	VRS-TS2AD3R0J	AA		C	Resistor(1/10W 3.0Ω ±5%)	[R155]
225	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%)	[R156]
226	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R157]
227	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R158]
228	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R159]
229	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R160]
230	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R161]
231	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R162]
232	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%)	[R163]
233	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R164]
234	VRS-TS2AD474J	AA		C	Resistor(1/10W 470KΩ ±5%)	[R165]
235	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R166]
236	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R167]
237	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R168]
238	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R169]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[7] Control PWB unit						
239	VRS-TS2AD302J	AA		C	Resistor(1/10W 3KΩ ±5%)	[R170]
240	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R171]
241	VRS-TS2AD224J	AA		C	Resistor(1/10W 220KΩ ±5%)	[R172]
242	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R173]
243	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R174]
244	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R175]
245	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R176][370ES/SE/780AT/ES]
246	VRS-TS2AD473J	AA		C	Resistor(1/10W 47KΩ ±5%)	[R177][370ES/SE/780AT/ES]
247	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R180]
248	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R181]
249	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R182]
250	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R183]
251	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R184]
252	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R185]
253	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R186]
254	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R187]
255	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%)	[R188]
256	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R189]
257	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%)	[R190]
258	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%)	[R191]
259	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R192]
260	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R193][370F]
261	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R194][370ES/SE/780AT/ES]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R194][370F]
263	VRSTS2AD1183F	AA		C	Resistor(1/10W 118KΩ ±1%)	[R195]
264	VRS-TS2AD152J	AA		C	Resistor(1/10W 1.5KΩ ±5%)	[R196][370ES/SE/780AT/ES]
265	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R197]
266	VRS-TS2AD473J	AA		C	Resistor(1/10W 47KΩ ±5%)	[R198][370ES/SE/780AT/ES]
	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R198][370F]
268	VRSTS2AD1742F	AA		C	Resistor(1/10W 17.4KΩ ±1%)	[R199][370ES/SE/780AT/ES]
269	VRS-TS2AD133J	AA		C	Resistor(1/10W 13KΩ ±5%)	[R200][370ES/SE/780AT/ES]
	VRSTS2AD1742F	AA		C	Resistor(1/10W 17.4KΩ ±1%)	[R200][370F]
271	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R201][370ES/SE/780AT/ES]
272	VRSTS2AD8662F	AA		C	Resistor(1/10W 86.6KΩ ±1%)	[R203]
273	VRS-TS2AD512J	AA		C	Resistor(1/10W 5.1KΩ ±5%)	[R207]
274	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R208]
275	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R209]
276	VRS-TS2AD224J	AA		C	Resistor(1/10W 220KΩ ±5%)	[R210]
277	VRS-TS2AD106J	AA		C	Resistor(1/10W 10MΩ ±5%)	[R211]
278	VRS-TS2AD121J	AA		C	Resistor(1/10W 120Ω ±5%)	[R212]
279	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R213][370ES/780ES]
	VRS-TS2AD392J	AA		C	Resistor(1/10W 3.9KΩ ±5%)	[R213][370SE/780AT]
	VRSTS2AD1183F	AA		C	Resistor(1/10W 118KΩ ±1%)	[R213][370F]
282	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R214][370ES/SE/780AT/ES]
283	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R215]
284	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R216]
285	VRSTS2AD8662F	AA		C	Resistor(1/10W 86.6KΩ ±1%)	[R217]
286	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%)	[R218]
287	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R219]
288	VRS-TS2AD302J	AA		C	Resistor(1/10W 3KΩ ±5%)	[R220]
289	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%)	[R221]
290	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R224]
291	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R225]
292	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R228]
293	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%)	[R229]
294	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R230]
295	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R231]
296	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R232]
297	RR-TZ3017SCZZ	AC	N	C	Block resistor(270Ωx4)	[RA1]
298	RR-TZ3018SCZZ	AC	N	C	Block resistor(470Ωx4)	[RA2]
299	RR-TZ3017SCZZ	AC	N	C	Block resistor(270Ωx4)	[RA3]
300	RR-TZ3017SCZZ	AC	N	C	Block resistor(270Ωx4)	[RA4]
301	RR-TZ3017SCZZ	AC	N	C	Block resistor(270Ωx4)	[RA5]
302	RR-TZ3017SCZZ	AC	N	C	Block resistor(270Ωx4)	[RA6]
303	RR-TZ3018SCZZ	AC	N	C	Block resistor(470Ωx4)	[RA7]
304	RR-TZ3017SCZZ	AC	N	C	Block resistor(270Ωx4)	[RA8]
305	RR-TZ3017SCZZ	AC	N	C	Block resistor(270Ωx4)	[RA9]
306	RR-TZ3017SCZZ	AC	N	C	Block resistor(270Ωx4)	[RA10]
307	RR-TZ3017SCZZ	AC	N	C	Block resistor(270Ωx4)	[RA11]
308	RR-TZ3012SCJ0	AB	N	C	Block resistor(100Ωx4)	[RA12]
309	RR-TZ3018SCZZ	AC	N	C	Block resistor(470Ωx4)	[RA13]
310	RR-TZ3012SCJ0	AB	N	C	Block resistor(100Ωx4)	[RA14]
311	RRLYD3130SCZZ	AN		B	Relay	[RY1]
312	QSW-M2259XHZZ	AF		B	Cover switch	[SW1]
313	RCRSQ1005LCZZ	AE		B	Crystal(19.66MHz)	[X1]
314	RCRSB2122SCZZ	AH		B	Crystal(24.00014MHz)	[X2]
315	RCRSB0297AFZZ	AD		B	Crystal(32.768kHz)	[X3]
	(Unit)					
901	CPWBS3026FF04		N	E	Control PWB unit(Without ROM)	[370ES/780ES]
	CPWBS3026FF05		N	E	Control PWB unit(Without ROM)	[370SE/780AT]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[7] Control PWB unit						
	(Unit)					
901	CPWBS3026FF03		N	E	Control PWB unit(Without ROM)	[370F]
[8] TEL-Liu PWB unit(UX-370ES/SE/FO-780AT/ES)						
1	VHVRA501PV6-1	AE		B	Varistor(RA-501P-V6-2)	[AR1]
2	VHVRA501PV6-1	AE		B	Varistor(RA-501P-V6-2)	[AR2]
3	QCNW-4753XHZZ	AE		C	Cable	[ARG]
4	VCEAGA1HW335M	AB		C	Capacitor(50WV 3.3µF)	[C1][370ES/780ES]
	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7µF)	[C1][370SE/780AT]
6	RC-FZ2023SCZZ	AF		C	Capacitor(250WV 1.5µF)	[C2]
7	RC-FZ2022SCZZ	AD		C	Capacitor(250WV 0.47µF)	[C3][370ES/780ES]
	RC-FZ3028SCZZ	AG		C	Capacitor(250WV 0.56µF)	[C3][370SE]
	RC-FZ2020SCZZ	AE		C	Capacitor(250WV 1.0µF)	[C3][780AT]
10	VCQYNA1HM334K	AD		C	Capacitor(50WV 0.33µF)	[C4][370SE]
11	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C5]
12	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C6]
13	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C7]
14	VCEAGA1EW107M	AB		C	Capacitor(25WV 100µF)	[C8]
15	VCEAGA1HW225M	AA		C	Capacitor(50WV 2.2µF)	[C9]
16	VCEAGA1EW476M	AA		C	Capacitor(25WV 47µF)	[C10]
17	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C11]
18	VCEAGA1EW476M	AA		C	Capacitor(25WV 47µF)	[C12]
19	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C13]
20	VCEAGA1EW476M	AA		C	Capacitor(25WV 47µF)	[C14]
21	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7µF)	[C15]
22	VCKYTQ1HB473K	AA		C	Capacitor(50WV 0.047µF)	[C103][370SE]
23	VCKYTV1HB473K	AA		C	Capacitor(50WV 0.047µF)	[C104][370ES/SE/780ES]
	VCKYTV1HB472K	AA		C	Capacitor(50WV 4700PF)	[C104][780AT]
25	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C105]
26	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C106]
27	VCKYTV1HB392K	AA		C	Capacitor(50WV 3900PF)	[C107][370ES/780ES]
	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C107][370SE/780AT]
29	VCKYTV1HB221K	AA		C	Capacitor(50WV 220PF)	[C110]
30	VCKYTV1HB223K	AA		C	Capacitor(50WV 0.022µF)	[C111][370ES/SE/780ES]
31	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C112]
32	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1µ)	[C113]
33	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1µ)	[C114]
34	VCKYTV1HB471K	AA		C	Capacitor(50WV 470PF)	[C115][370ES/780AT/ES]
	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF)	[C115][370SE]
36	VCKYTQ1HB473K	AA		C	Capacitor(50WV 0.047µF)	[C116][370ES/780ES]
	VCKYTQ1HB104K	AB		C	Capacitor(50WV 0.1µF)	[C116][370SE]
	VCKYTQ1HB393K	AA		C	Capacitor(50WV 0.039µF)	[C116][780AT]
39	VCKYTQ1HB392K	AB		C	Capacitor(50WV 3900PF)	[C117][370ES/780ES]
	VCKYTQ1HB563K	AA		C	Capacitor(50WV 0.056µF)	[C117][370SE]
	VCKYTQ1HB183K	AA		C	Capacitor(50WV 0.018µF)	[C117][780AT]
42	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C118]
43	VCKYTV1HB681K	AA		C	Capacitor(50WV 680PF)	[C119][370ES/780ES]
	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF)	[C119][370SE]
	VCKYTV1HB472K	AA		C	Capacitor(50WV 4700PF)	[C119][780AT]
46	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C120]
47	VCKYTV1HB822K	AA		C	Capacitor(50WV 8200PF)	[C121][370ES/780ES]
	VCKYTV1HB152K	AA		C	Capacitor(50WV 1500PF)	[C121][370SE/780AT]
49	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C122]
50	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01µF)	[C123][370ES/SE/780ES]
51	VCKYTV1HB223K	AA		C	Capacitor(50WV 0.022µF)	[C124][370ES/SE/780ES]
52	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C125]
53	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C126]
54	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C127]
55	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C128][370ES/780AT/ES]
	VCKYTV1HB561K	AA		C	Capacitor(50WV 560PF)	[C128][370SE]
57	VCKYTQ1HB683K	AB		C	Capacitor(50WV 0.068µF)	[C130][370ES/780AT/ES]
	VCKYTQ1HB333K	AA		C	Capacitor(50WV 0.033µF)	[C130][370SE]
59	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1µF)	[C131]
60	VCKYTQ1EB105K	AD		C	Capacitor(25WV 1.0µF)	[C132][370ES/SE/780ES]
	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%)	[C132][780AT]
⚠ 62	RRLYZ3427SCZZ	AN		B	Relay	[CML]
63	QJAKZ2070SC0D	AF		C	Jack	[CNHJ]
64	QCNCW2509SC1D	AF	N	C	Connector(14pin)	[CNLIUA]
65	QCNCW2509SC0F	AD	N	C	Connector(6pin)	[CNLIUB]
66	QJAKZ2069SCFB	AG	N	C	Jack	[CNLNJ]
67	VHDDSS131//-1	AA		B	Diode(1SS131)	[D1]
68	VHDDSS131//-1	AA		B	Diode(1SS131)	[D2][370SE]
69	VHDDSS131//-1	AA		B	Diode(1SS131)	[D3]
70	VHDDSS133//-1	AA		B	Diode(1SS133)	[D4]
71	VHDDSS133//-1	AA		B	Diode(1SS133)	[D5]
72	VHINJM2904M-2	AG		B	IC(NJM2904M)	[IC101]
73	VHINJM2904M-2	AG		B	IC(NJM2904M)	[IC102]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[8] TEL-Liu PWB unit(UX-370ES/SE/FO-780AT/ES)						
74	VHINJM2904M-2	AG		B	IC(NJM2904M)	[IC103]
75	RCILZ2144SCZZ	AC	N	C	Coil(Z2144)	[JP103]
76	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[JP104]
77	RCILZ2144SCZZ	AC	N	C	Coil(Z2144)	[JP105]
78	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[JP106]
79	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[JP107][370ES/780AT/ES]
80	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[JP108][370ES/780AT/ES]
81	RCILF2125SCZZ	AD		C	Coil(4.7mH)	[L3]
⚠ 82	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L5A]
⚠ 83	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L5B]
⚠ 84	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L6]
⚠ 85	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L7]
⚠ 86	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L8]
⚠ 87	VHPTLP627//-1	AH		B	Photo coupler(TLP627)	[PC1]
⚠ 88	VHPTLP627//-1	AH		B	Photo coupler(TLP627)	[PC2]
⚠ 89	VHPTLP627//-1	AH		B	Photo coupler(TLP627)	[PC3]
⚠ 90	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC5][370ES/SE/780ES]
⚠ 91	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC6]
92	VHPSG206S//-1	AG		B	Photo transistor(SG206S)	[PE]
93	VHPSG206S//-1	AG		B	Photo transistor(SG206S)	[PIN]
94	VSBS108////-1	AE		B	FET(BS108)	[Q1]
95	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q101][370SE]
96	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q102]
97	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q103]
98	VS2SJ106GR/-1	AD		B	FET(2SJ106GR)	[Q104][370ES/SE/780ES]
99	VS2SJ106GR/-1	AD		B	FET(2SJ106GR)	[Q105][370ES/SE/780ES]
100	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q106]
101	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q107]
102	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q108]
103	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q109]
104	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q110]
105	VRS-HT3DA470J	AA		C	Resistor(2W 47Ω ±5%)	[R1][780AT]
106	VRD-HT2HY513J	AA		C	Resistor(1/2W 51KΩ ±5%)	[R3][370ES/780ES]
	VRD-HT2HY223J	AA		C	Resistor(1/2W 22KΩ ±5%)	[R3][370SE]
	VRD-HT2HY153J	AB		C	Resistor(1/2W 15KΩ ±5%)	[R3][780AT]
109	VRS-TS2AD124J	AA		C	Resistor(1/10W 120KΩ ±5%)	[R102][370ES/780ES]
	VRS-TS2AD433J	AA		C	Resistor(1/10W 43KΩ ±5%)	[R102][370SE/780AT]
111	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R103][370ES/780AT/ES]
	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%)	[R103][370SE]
113	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R104][370SE]
114	VRS-TP2BD301J	AA		C	Resistor(1/8W 300Ω ±5%)	[R105][370ES/SE/780ES]
115	VRS-TP2BD300J	AA		C	Resistor(1/8W 30Ω ±5%)	[R107][370ES/780ES]
	VRS-TP2BD390J	AA		C	Resistor(1/8W 39Ω ±5%)	[R107][370SE]
	VRS-TP2BD150J	AA		C	Resistor(1/8W 15Ω ±5%)	[R107][780AT]
118	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R108][370ES/780AT/ES]
	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%)	[R108][370SE]
120	VRS-TP2BD150J	AA		C	Resistor(1/8W 15Ω ±5%)	[R109][370ES/780AT/ES]
	VRS-TP2BD100J	AA		C	Resistor(1/8W 10Ω ±5%)	[R109][370SE]
122	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R110][370SE]
123	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R111][370SE]
124	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R114][370SE]
125	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R119][370ES/SE/780ES]
	VRS-TS2AD133J	AA		C	Resistor(1/10W 13KΩ ±5%)	[R119][780AT]
127	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R120]
128	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R121]
129	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R122][370ES/780ES]
	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R122][370SE]
	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%)	[R122][780AT]
132	VRS-TS2AD513J	AA		C	Resistor(1/10W 51KΩ ±5%)	[R123]
133	VRS-TS2AD513J	AA		C	Resistor(1/10W 51KΩ ±5%)	[R124]
134	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R125]
135	VRS-TS2AD131J	AA		C	Resistor(1/10W 130Ω ±5%)	[R126]
136	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R127]
137	VRS-TS2AD514J	AG		C	Resistor(1/10W 510KΩ ±5%)	[R130][370ES/SE/780ES]
138	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R131]
139	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R132]
140	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R133][370ES/SE/780ES]
	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%)	[R133][780AT]
142	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R134]
143	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R135]
144	VRS-TS2AD822J	AA		C	Resistor(1/10W 8.2KΩ ±5%)	[R136]
145	VRS-TS2AD152J	AA		C	Resistor(1/10W 1.5KΩ ±5%)	[R137]
146	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R138][370ES/SE/780ES]
147	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R139][370ES/SE/780ES]
	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R139][780AT]
149	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R140]
150	VRS-TS2AD100J	AA		C	Resistor(1/10W 10.0Ω ±5%)	[R141]
151	VRS-TS2AD621J	AA		C	Resistor(1/10W 620Ω ±5%)	[R142]
152	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R143]
153	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R144]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[8] TEL-Liu PWB unit(UX-370ES/SE/FO-780AT/ES)						
154	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R145]
155	VRS-TS2AD182J	AA		C	Resistor(1/10W 1.8KΩ ±5%)	[R147][370ES/780ES]
	VRS-TS2AD911J	AA		C	Resistor(1/10W 910Ω ±5%)	[R147][370SE]
	VRS-TS2AD821J	AA		C	Resistor(1/10W 820Ω ±5%)	[R147][780AT]
158	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R148]
159	VRS-TS2AD123J	AA		C	Resistor(1/10W 12KΩ ±5%)	[R149][370ES/780AT/ES]
	VRS-TS2AD163J	AA		C	Resistor(1/10W 16KΩ ±5%)	[R149][370SE]
161	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R150][370ES/SE/780ES]
	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%)	[R150][780AT]
163	VRS-TS2AD302J	AA		C	Resistor(1/10W 3KΩ ±5%)	[R151][370ES/780ES]
	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R151][370SE]
	VRS-TS2AD911J	AA		C	Resistor(1/10W 910Ω ±5%)	[R151][780AT]
166	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R152][370ES/780ES]
	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R152][780AT]
168	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%)	[R153]
169	VRS-TS2AD134J	AA		C	Resistor(1/10W 130KΩ ±5%)	[R154][370ES/780ES]
	VRS-TS2AD124J	AA		C	Resistor(1/10W 120KΩ ±5%)	[R154][370SE]
	VRS-TS2AD683J	AA		C	Resistor(1/10W 68KΩ ±5%)	[R154][780AT]
172	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R155]
173	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R156]
174	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R157][370ES/780ES]
	VRS-TS2AD473J	AA		C	Resistor(1/10W 47KΩ ±5%)	[R157][370SE]
176	VRS-TS2AD243J	AA		C	Resistor(1/10W 24KΩ ±5%)	[R158][370ES/780ES]
	VRS-TS2AD393J	AA		C	Resistor(1/10W 39KΩ ±5%)	[R158][370SE]
	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R158][780AT]
179	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%)	[R159]
180	VRS-TS2AD623J	AA		C	Resistor(1/10W 62KΩ ±5%)	[R160][370ES/780AT/ES]
	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%)	[R160][370SE]
182	VRS-TS2AD514J	AG		C	Resistor(1/10W 510KΩ ±5%)	[R161][370ES/SE/780ES]
183	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R165][370SE]
184	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%)	[R166]
185	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R167][370ES/780AT/ES]
	VRS-TS2AD563J	AA		C	Resistor(1/10W 56KΩ ±5%)	[R167][370SE]
187	VRS-TS2AD100J	AA		C	Resistor(1/10W 10.0Ω ±5%)	[R168]
188	VHDS1ZB60//-1	AC		B	Diode bridge(S1ZB60)	[REC1]
⚠ 189	RRLYZ3427SCZZ	AN		B	Relay	[S-RLY][370SE]
190	QSW-Z2263XHZZ	AG		B	Hook switch	[SW1]
⚠ 191	RTRNI2142XHZZ	AR		B	Transformer(I2142)	[T1]
192	VHVDSS301L/-U	AF		B	Varistor(DSS301L)	[VA1]
193	VHEBZX79B27/A	AC		B	Zener diode(BZX79B27V)	[ZD2][370ES/780ES]
	VHEBZX79B30/A	AC		B	Zener diode(BZX79B30V)	[ZD2][370SE]
	VHEBZX79B20/A	AC		B	Zener diode(BZX79B20V)	[ZD2][780AT]
196	VHEBZX79B27/A	AC		B	Zener diode(BZX79B27V)	[ZD3][370ES/780ES]
	VHEBZX79B20/A	AC		B	Zener diode(BZX79B20V)	[ZD3][780AT]
198	VHEBZX79B6V8A			B	Zener diode(BZX79B6V8)	[ZD4][370SE/780AT]
199	VHEBZX79B30/A	AC		B	Zener diode(BZX79B30V)	[ZD5]
200	VHEBZX79B4V7A			B	Zener diode(BZX79B4V7)	[ZD6][370ES/SE/780ES]
	VHEBZX79B3V3A			B	Zener diode(BZX79B3V3)	[ZD6][780AT]
202	VHEBZX79B4V7A			B	Zener diode(BZX79B4V7)	[ZD7][370ES/SE/780ES]
	VHEBZX79B3V3A			B	Zener diode(BZX79B3V3)	[ZD7][780AT]
204	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD8]
205	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD9]
206	VHEBZX79B2V4A			B	Zener diode(BZX79B2V4)	[ZD10]
207	VHEBZX79B2V4A			B	Zener diode(BZX79B2V4)	[ZD11]
	(Unit)					
901	DCEKL457BFF06		N	E	TEL-Liu PWB unit	[370ES/780ES]
	DCEKL457BFF09		N	E	TEL-Liu PWB unit	[370SE]
	DCEKL457BFF08		N	E	TEL-Liu PWB unit	[780AT]
[9] TEL-Liu PWB unit(UX-370F)						
1	VHVRA501PV6-1	AE		B	Varistor(RA-501P-V6-2)	[AR1]
2	VHVRA501PV6-1	AE		B	Varistor(RA-501P-V6-2)	[AR2]
3	VCEAGA1HW335M	AB		C	Capacitor(50WV 3.3μF)	[C2]
4	VCEAGA2AW225M	AC		C	Capacitor(100WV 2.2μF)	[C3]
5	VCEAGA1HW226M	AB		C	Capacitor(50WV 22μF)	[C4]
6	VCQYNA1HM473K	AA		C	Capacitor(50WV 0.047μF)	[C5]
7	RC-FZ2022SCZZ	AD		C	Capacitor(10WV 0.47μF)	[C6]
8	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF)	[C7]
9	RC-FZ2025SCZZ	AE		C	Capacitor(250WV 0.68μF)	[C9]
10	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF)	[C11]
11	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF)	[C12]
12	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF)	[C13]
13	VCEAEA1HW226M	AB		C	Capacitor(50WV 22μF)	[C14]
14	VCEAEA1EW476M	AB		C	Capacitor(25WV 47μF)	[C15]
15	VCEAEA1HW106M	AA		C	Capacitor(50WV 10μF)	[C16]
16	VCEAEA1HW106M	AA		C	Capacitor(50WV 10μF)	[C17]
17	VCKYPU1HB102K	AA		C	Capacitor(50WV 1000PF)	[C20]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[9] TEL-Liu PWB unit(UX-370F)						
18	VCKYTQ1HB473K	AA		C	Capacitor(50WV 0.047μF)	[C101]
19	VCKYTQ1HB223K	AB		C	Capacitor(50WV 0.022μF)	[C102]
20	VCKYTQ1HB473K	AA		C	Capacitor(50WV 0.047μF)	[C103]
21	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C104]
22	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C105]
23	VCKYTQ1HB102K	AA		C	Capacitor(50WV 1000PF)	[C106]
24	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C107]
25	VCKYTV1HB122K	AB		C	Capacitor(50WV 1200PF)	[C108]
26	VCKYTV1HB472K	AA		C	Capacitor(50WV 4700PF)	[C110]
27	VCKYTQ1HB183K	AA		C	Capacitor(50WV 0.018μF)	[C111]
28	VCKYTV1HB152K	AA		C	Capacitor(50WV 1500PF)	[C112]
29	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μ)	[C114]
30	VCKYTQ1HB103K	AA		C	Capacitor(50WV 0.01μ)	[C116]
31	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1μF)	[C117]
32	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C118]
33	VCKYTQ1HB473K	AA		C	Capacitor(50WV 0.047μF)	[C119]
34	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C121]
35	VCKYTV1HB331K	AA		C	Capacitor(50WV 330PF)	[C122]
36	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1μF)	[C123]
37	VCKYTV1HB121K	AA		C	Capacitor(50WV 120PF)	[C124]
38	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1μF)	[C125]
39	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF)	[C126]
40	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C127]
41	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C128]
42	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C129]
43	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.1μF)	[C130]
44	VCKYTV1HB333K	AA		C	Capacitor(50WV 0.033μF)	[C132]
45	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF)	[C133]
46	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF)	[C144]
47	VCKYTV1HB333K	AA		C	Capacitor(50WV 0.033μF)	[C145]
48	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF)	[C146]
⚠ 49	RRLYZ3427SCZZ	AN		B	Relay	[CID-R]
⚠ 50	RRLYZ3427SCZZ	AN		B	Relay	[CML]
51	QJAKZ2070SC0D	AF		C	Jack	[CNHJ]
52	QCNCW2509SC1B		N	C	Connector(12pin)	[CNLIUA]
53	QCNCW2509SC0F	AD	N	C	Connector(6pin)	[CNLIUB]
54	QJAKZ2069SCF0	AH	N	C	Jack	[CNLNJ]
55	VHDDSS131//-1	AA		B	Diode(1SS131)	[D1]
56	VHDDSS133//-1	AA		B	Diode(1SS133)	[D4]
57	VHDDSS133//-1	AA		B	Diode(1SS133)	[D5]
58	VHITEA1062A-1	AR		B	IC(TEA1062A)	[IC1]
59	VHINJM2904M-2	AG		B	IC(NJM2904M)	[IC101]
60	VHINJM2904M-2	AG		B	IC(NJM2904M)	[IC102]
61	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[JP102]
62	RCILZ2144SCZZ	AC		C	Coil(Z2144)	[JP103]
63	RCILZ2144SCZZ	AC		C	Coil(Z2144)	[JP105]
64	VRS-TS2AD000J	AA		C	Resistor(1/8W 0Ω ±5%)	[JP106]
65	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[JP108]
66	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[JP112]
67	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[JP113]
⚠ 68	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L1A]
⚠ 69	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L1B]
⚠ 70	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L2A]
⚠ 71	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L2B]
⚠ 72	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L3A]
⚠ 73	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L3B]
⚠ 74	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L4A]
⚠ 75	RFILN2027XHZZ	AC		C	Coil(R-5C)	[L4B]
⚠ 76	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC2]
⚠ 77	VHPTLP627//-1	AH		B	Photo coupler(TLP627)	[PC4]
⚠ 78	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC6]
⚠ 79	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC7]
⚠ 80	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC9]
⚠ 81	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC10]
82	VHPSG206S//-1	AG		B	Photo transistor(SG206S)	[PE]
83	VHPSG206S//-1	AG		B	Photo transistor(SG206S)	[PIN]
84	VS2SA1807-P-1	AE		B	Transistor(2SA1807P)	[Q1]
85	VSBUK554-200A	AM		B	FET(BUK554-200A)	[Q2]
86	VS2SC4061K/-1	AC		B	Transistor(2SC4061K)	[Q103]
87	VS2SC2412KR-1	AD		B	Transistor(2SC2412K)	[Q104]
88	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q112]
89	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q114]
90	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q115]
91	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q116]
92	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q117]
93	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q118]
94	VRD-HT2HY200J	AA		C	Resistor(1/2W 20Ω ±5%)	[R2]
95	VRD-HT2HY433J	AA		C	Resistor(1/2W 43KΩ ±5%)	[R3]
96	VRS-HT3AA333J	AA		C	Resistor(1W 33KΩ ±5%)	[R4]
97	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R101]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[9] TEL-Liu PWB unit(UX-370F)						
98	VRS-TS2AD392J	AA		C	Resistor(1/10W 3.9KΩ ±5%)	[R102]
99	VRS-TS2AD134J	AA		C	Resistor(1/10W 130KΩ ±5%)	[R103]
100	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R104]
101	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%)	[R105]
102	VRS-TS2AD681J	AA		C	Resistor(1/10W 680Ω ±5%)	[R106]
103	VRS-TS2AD561J	AA		C	Resistor(1/10W 560Ω ±5%)	[R107]
104	VRS-TS2AD105J	AA		C	Resistor(1/10W 1MΩ ±5%)	[R109]
105	VRS-TS2AD220J	AA		C	Resistor(1/10W 22Ω ±5%)	[R110]
106	VRS-TS2AD621J	AA		C	Resistor(1/10W 620Ω ±5%)	[R112]
107	VRS-TS2AD224J	AA		C	Resistor(1/10W 220KΩ ±5%)	[R117]
108	VRS-TS2AD621J	AA		C	Resistor(1/10W 620Ω ±5%)	[R118]
109	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R120]
110	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%)	[R121]
111	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R123]
112	VRS-TS2AD124J	AA		C	Resistor(1/10W 120KΩ ±5%)	[R124]
113	VRS-TS2AD153J	AA		C	Resistor(1/10W 15KΩ ±5%)	[R126]
114	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R127]
115	VRS-TP2BD200J	AA		C	Resistor(1/8W 20Ω ±5%)	[R128]
116	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%)	[R133]
117	VRS-TS2AD433J	AA		C	Resistor(1/10W 43KΩ ±5%)	[R137]
118	VRS-TS2AD753J	AA		C	Resistor(1/10W 75KΩ ±5%)	[R138]
119	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%)	[R139]
120	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R140]
121	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R141]
122	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R142]
123	VRS-TS2AD241J	AA		C	Resistor(1/10W 240Ω ±5%)	[R143]
124	VRS-TS2AD560J	AA		C	Resistor(1/10W 56Ω ±5%)	[R144]
125	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R145]
126	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R146]
127	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R147]
128	VRS-TS2AD431J	AA		C	Resistor(1/10W 430Ω ±5%)	[R148]
129	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%)	[R149]
130	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R151]
131	VRS-TS2AD363J	AA		C	Resistor(1/10W 36KΩ ±5%)	[R152]
132	VRS-TS2AD621J	AA		C	Resistor(1/10W 620Ω ±5%)	[R153]
133	VRS-TS2AD393J	AA		C	Resistor(1/10W 39KΩ ±5%)	[R154]
134	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R155]
135	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R156]
136	VRS-TS2AD623J	AA		C	Resistor(1/10W 62KΩ ±5%)	[R157]
137	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R159]
138	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R160]
139	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%)	[R161]
140	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%)	[R162]
141	VRS-TS2AD131J	AA		C	Resistor(1/10W 130Ω ±5%)	[R164]
142	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%)	[R165]
143	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%)	[R166]
144	VRS-TS2AD362J	AA		C	Resistor(1/10W 3.6KΩ ±5%)	[R171]
145	VRSTS2AD3651F	AA		C	Resistor(1/10W 3.65KΩ ±1%)	[R172]
146	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R173]
147	VRS-TS2AD122J	AA		C	Resistor(1/10W 1.2KΩ ±5%)	[R174]
148	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R175]
149	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%)	[R179]
150	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%)	[R184]
151	VRS-TS2AD100J	AA		C	Resistor(1/10W 10Ω ±5%)	[R185]
152	VHD0R5G4B42-1S	AF		B	Diode bridge(0R5G4B42)	[REC1]
⚠ 153	QSW-Z2264XHZZ			B	Hook switch	[SW2]
⚠ 154	RTRNI2142XHZZ	AR		B	Transformer(I2142)	[T1]
⚠ 155	RTRNZ2140XHZZ	AN		B	Transformer(Z2140)	[T2]
156	VHVTN07G101-1	AB		B	Varistor(TNR7G101K)	[VA1]
157	VHEBZX79B5V6A			B	Zener diode(BZX79B5V6)	[ZD1]
158	VHEBZX79B24/A			B	Zener diode(BZX79B24V)	[ZD2]
159	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD4]
160	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD5]
161	VHEBZX79B10/A	AC	N	B	Zener diode(BZX79B10V)	[ZD9]
162	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD12]
163	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD13]
164	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD14]
165	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD15]
	(Unit)					
901	DCEKL459BFF02		N	E	TEL-Liu PWB unit	
[10] Power supply PWB unit						
1	0CBUGFM224KR/	AF	N	C	Capacitor(RE224-C)	[C1]
2	0CBUGZ1186ZZ/	AL	N	C	Capacitor(KMF400VB-39M 18x20)	[C2]
3	0CBUGZ1187ZZ/	AD	N	C	Capacitor(DE1407-477SL471J2K)	[C3]
4	0CBUGFF472BQ/	AC	N	C	Capacitor(AMZ-472K50)	[C4]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[10] Power supply PWB unit						
5	0CBUGFF223JS/	AC	N	C	Capacitor(ECQB1H223KM3)	[C5]
6	0CBUGCM332BJ/	AF	N	C	Capacitor(DE1410-1E332M-KX)	[C7]
7	0CBUGAE331TS/	AH	N	C	Capacitor(LXJ35VB330(M))	[C8]
8	0CBUGFF474JA/	AF	N	C	Capacitor(ECQV1H474JL3)	[C9]
9	0CBUGZ1188ZZ/	AK	N	C	Capacitor(16YXG2200M(10X28L))	[C10]
10	0CBUGCF104CQ/	AD	N	C	Capacitor(UP050F104Z-B)	[C11]
11	0CBUGCS101AA/	AD	N	C	Capacitor(DD05-989B101K500)	[C13]
12	0CBUGFM104KD/	AF	N	C	Capacitor(PA104-ZC)	[C15]
13	0CBUGAB101RV/	AF	N	C	Capacitor(KME10VB100(M))	[C16]
14	0CBUGFF102BQ/	AD	N	C	Capacitor(AMZ-102K50)	[C17]
15	0CBPZZ0931ZZ/	AH	N	C	Connector(IMSA-9110S-09L)	[CN1]
16	0CBPKZ0194ZZ/	AC		C	Base post assy(B 2P3-VH)	[CN2]
17	0CBUBC0125DK/	AD	N	B	Diode(ERA15-06)	[D1]
18	0CBUBC0125DK/	AD	N	B	Diode(ERA15-06)	[D2]
19	0CBUBC0125DK/	AD	N	B	Diode(ERA15-06)	[D3]
20	0CBUBC0125DK/	AD	N	B	Diode(ERA15-06)	[D4]
21	0CBUBA0011AL/	AD	N	B	Diode(1SS133)	[D5]
22	0CBUBC0336AZ/	AL		B	Diode(S3L20U-4004P15)	[D7]
23	0CBUBC0302BZ/	AE		B	Diode(SR140)	[D8]
24	0CBPJCEJ1601/	AH	N	A	Current fuse(21501.6 ME600)	[F1]
25	0CBPJCEJ1601/	AH	N	A	Current fuse(21501.6 ME600)	[F2]
26	0CBPZZ0906ZZ/	AH		A	Circuit protect chip(CCP2E100)	[F3]
27	0CBUCB0167AZ/	AR		B	IC(UPC29M05HF)	[IC1]
28	0CBUKZ0826ZZ/	AK		C	Filter(ELF15N003A)	[L1]
29	0CBUZZ0156ZZ/	AN	N	C	Coil(RS208)	[L2]
30	0CBLRZ6581ZN/	AQ	N	C	Heat sink	[MT1]
31	0CBLRZ6562ZN/	AQ	N	C	Heat sink	[MT2]
32	0CBUDC0163CZ/	AG	N	B	Photo coupler(PC123YS)	[PC1]
33	0CBUDC0163CZ/	AG	N	B	Photo coupler(PC123YS)	[PC2]
34	0CBUAG0161AC/	AQ	N	B	FET(FS5KM-18A AN)	[Q1]
35	0CBUAC0264AZ/	AD		B	Transistor(2SC1741AS QR)	[Q2]
36	0CBUAC0034EZ/	AE		B	Transistor(2SC1740S)	[Q3]
37	0CBUAC0034EZ/	AE		B	Transistor(2SC1740S)	[Q4]
38	0CBUAC0284BK/	AF	N	B	Transistor(2SC2710)	[Q5]
39	0CBUAC0284BK/	AF	N	B	Transistor(2SC2710)	[Q6]
40	0CBUEEC335CF/	AC	N	C	Resistor(RD50SS-335J)	[R1]
41	0CBUEEB824CF/	AC	N	C	Resistor(RD50SS-824J)	[R2]
42	0CBUEEB824CF/	AC	N	C	Resistor(RD50SS-824J)	[R3]
43	0CBUEEB101CT/	AC		C	Resistor(RD16S 101J)	[R4]
44	0CBUEEB152CT/	AC	N	C	Resistor(RD16S 152J)	[R5]
45	0CBUEEB223CT/	AC		C	Resistor(RD16S 223J)	[R6]
46	0CBUEEB330CT/	AC	N	C	Resistor(RD16S 330J)	[R7]
47	0CBUEEB473CT/	AC	N	C	Resistor(RD16S 473J)	[R8]
48	0CBUEEB471CT/	AC		C	Resistor(RD16S 471J)	[R9]
49	0CBUEFDR33DB/	AE	N	C	Resistor(RSMF1TBR33G)	[R10]
50	0CBUEEB390CT/	AC	N	C	Resistor(RD16S 390J)	[R11]
51	0CBUEEB334CT/	AC		C	Resistor(RD16S 334J)	[R12]
52	0CBUEEB472CT/	AC		C	Resistor(RD16S 472J)	[R13]
53	0CBUEEB682CT/	AC		C	Resistor(RD16S 682J)	[R16]
54	0CBUEEB242CT/	AC		C	Resistor(RD16S 242J)	[R17]
55	0CBUEEB392CT/	AC		C	Resistor(RD16S-392J)	[R18]
56	0CBUEEB472CT/	AC		C	Resistor(RD16S 472J)	[R19]
57	0CBUEEB472CT/	AC		C	Resistor(RD16S 472J)	[R20]
58	0CBUEEC272CF/	AC	N	C	Resistor(RD50SS 272J)	[R21]
59	0CBUEEC272CF/	AC	N	C	Resistor(RD50SS 272J)	[R22]
60	0CB829585032/	BE	N	B	Transformer(PTTN121-KTT)	[T1]
61	0CBUDC0232AK/	AF	N	B	Thermistor(KL07L8R2TB)	[TH1]
62	0CBUEZ0507ZZ/	AD		B	Varistor(ERZV07D471-CS)	[V1]
63	0CBUFBA471DB/	AD		B	Variable resistor(EVNDJAA03BQ2(471))	[VR1]
64	0CBUBDBE270D/	AD	N	B	Zener diode(RD27ESAB3)	[ZD1]
65	0CBUBDBE2R0C/	AD	N	B	Zener diode(RD2.0ESAB2)	[ZD2]
66	0CBUBDBE200D/	AD	N	B	Zener diode(RD20ESAB3)	[ZD3]
67	0CBUBDBM300D/	AC		B	Zener diode(RD30FB3)	[ZD4]
68	0CBUBDBE6R2C/	AC		B	Zener diode(RD6.2ESAB2)	[ZD5]
	(Unit)					
⚠ 901	RDENT2137XHZZ	BL	N	E	Power supply PWB unit	

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PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
[C]				
CCNW-202AFF01	1-9		N	C
CGERH2444XHY1	1-10	AF	N	C
CGERH2459XH01	5-1	AM	N	C
CLEVP2298XH01	5-2	AC	N	C
CLEVP2299XH01	5-6	AC	N	C
CLEVP2300XH01	5-7	AC	N	C
CLEVP2303XH01	5-9	AC	N	C
CPLTP3002FFB1	6-5		N	E
CPLTP3002FFB2	6-5		N	E
CPLTP3002FFB7	6-5		N	E
CPWBS3026FF03	1-44		N	E
〃	7-901		N	E
CPWBS3026FF04	1-44		N	E
〃	7-901		N	E
CPWBS3026FF05	1-44		N	E
〃	7-901		N	E
CROLR2407XH01	2-10	AN	N	C
[D]				
DCEKL457BFF06	1-45		N	E
〃	8-901		N	E
DCEKL457BFF08	1-45		N	E
〃	8-901		N	E
DCEKL457BFF09	1-45		N	E
〃	8-901		N	E
DCEKL459BFF02	1-45		N	E
〃	9-901		N	E
DCEKP450BXHG1	3-7		N	E
DCEKP450BXHG2	3-7		N	E
DCEKP478BFF15	1-1		N	E
〃	3-901		N	E
DCEKP478BFF16	1-1		N	E
〃	3-901		N	E
DCEKP478BFF17	1-1		N	E
〃	3-901		N	E
DCEKP478BFF19	1-1		N	E
〃	3-901		N	E
DCEKP478BFF21	1-1		N	E
〃	3-901		N	E
DUNTK419BFFBG	6-19		N	E
DUNTK419BFFWH	6-19		N	E
[G]				
GCABA2324XHSQ	3-1		N	D
GCABA2324XHSR	3-1		N	D
GCABA2324XHSS	3-1		N	D
GCABA2324XHST	3-1		N	D
GCABA2324XHSW	3-1		N	D
GCABB2325FFSC	1-14		N	D
GCABB2325FFSE	1-14		N	D
GCOVA2403FFSA	2-1		N	C
GCOVA2403FFSC	2-1		N	C
GLEGG2068FFZZ	1-86			C
[H]				
HPNLH2389XHSN	1-85	AV	N	D
HPNLH2389XHSP	1-85		N	D
HPNLH2389XHSQ	1-85		N	D
HPNLH2389XHSS	1-85		N	D
HPNLH2389XHSV	1-85		N	D
[J]				
JBTN-2242XHSA	3-2	AG	N	C
JBTN-2242XHSC	3-2	AG	N	C
JBTN-2243XHSC	3-3	AD	N	C
JBTN-2244XHSA	3-4	AD	N	C
JBTN-2245XHSA	3-5	AD	N	C
JBTN-2246XHSA	3-6	AD	N	C
JBTN-2246XHSC	3-6	AD	N	C
JBTN-2252XHSA	3-3	AE	N	C
JKNBP2091XHZZ	2-2	AC	N	C
[L]				
LANGF2817XHFW	1-15	AF	N	C
LBSHP2088AXZZ	1-16	AC		C
LBSHP2104XHZZ	2-13	AC	N	C
LBSHP2105XHZZ	2-14	AC	N	C
LFRM-2198XHZZ	1-31	AK	N	C
LFRM-2199XHZZ	2-15	AK	N	C
LFRM-2200XHZZ	5-11	AB	N	C
LHLDW1033CE00	1-96	AA		C
LPLTG2911XHZZ	4-1	AE		C
LPLTM2994XHFW	5-12	AE	N	C
LPLTM2995XHFW	1-46	AS	N	C
LPLTP2908XHZZ	4-2	AE		C
LPLTP2997XHZZ	2-25	AD	N	C
LPLTP2998XHZZ	2-26	AF	N	C
LPLTP3001XHSA	2-27	AH	N	C
LPLTP3001XHSC	2-27	AF	N	C
LPLTP3003XHSA	6-7	AH	N	C
LX-BZ2138XHZZ	2-B6	AB		C
[M]				
MCAMP2025XHZZ	5-13	AB	N	C
MCAMP2026XHZZ	5-14	AB	N	C
MLEVP2290XHZZ	1-17	AC	N	C
MLEVP2291XHZZ	2-16	AD	N	C
MLEVP2292XHZZ	1-18	AD	N	C
MLEVP2293XHZZ	2-17	AD	N	C
MLEVP2294XHZZ	1-19	AD	N	C
MLEVP2295XHZZ	1-20	AD	N	C
MLEVP2296XHZZ	1-21	AD	N	C
MLEVP2297XHZZ	1-4	AC	N	C
MLEVP2301XHZZ	5-15	AB	N	C
MLEVP2302XHZZ	1-84	AC	N	C
MSPRC2832FFZZ	2-3			C
MSPRC3057FFFJ	1-47		N	C
MSPRC3059FFFJ	1-33		N	C
MSPRC3061FFFJ	1-35		N	C
MSPRC3062XHFJ	2-28	AB	N	C
MSPRC3063XHFJ	2-29	AC	N	C
MSPRC3064FFFJ	2-18		N	C
MSPRC3071FFFJ	4-4		N	C
MSPRC3102FFFJ	1-34		N	C
MSPRC3103FFFJ	1-32		N	C
MSPRD3065FFFJ	2-7		N	C
MSPRD3070XHFJ	5-16	AB	N	C
MSPRD3073FFFJ	1-23		N	C
MSPRD3082FFFJ	1-22		N	C
MSPRD3104FFFJ	1-92		N	C
MSPRD3105FFFJ	2-34		N	C
MSPRP3054XHFJ	1-24	AD	N	C
MSPRP3055XHFJ	1-25	AD	N	C
MSPRP3079XHFJ	4-5	AE	N	C
MSPRT2951FFZZ	4-6		N	C
MSPRT3069FFFJ	1-5		N	C
[N]				
NBRGP2141XHZZ	4-7	AH		C
NGERH2280XHZZ	5-17	AC		C
NGERH2311XHZZ	5-18	AD		C
NGERH2441XHZZ	2-19	AC	N	C
NGERH2442XHZZ	2-20	AC	N	C
NGERH2445XHZZ	1-26	AB	N	C
〃	4-8	AB	N	C
NGERH2446XHZZ	5-19	AB	N	C
NGERH2447XHZZ	5-20	AB	N	C
NGERH2448XHZZ	5-21	AB	N	C
NGERH2449XHZZ	5-22	AB	N	C
NGERH2450XHZZ	5-23	AB	N	C
NGERH2451XHZZ	5-24	AB	N	C
NGERH2452XHZZ	5-25	AB	N	C
NGERH2454XHZZ	5-26	AB	N	C
NGERH2455XHZZ	6-15	AD	N	C
NGERH2456XHZZ	6-16	AC	N	C
NGERH2460XHZZ	2-21	AC	N	C
NGERH2461XHZZ	5-27	AB	N	C
NGERP2318XHZZ	2-4	AD		C
NROLP2332XHZZ	2-8	AD		C
NROLP2334XHZA	4-9	AC		C
NROLP2406XHZZ	4-10	AD	N	C
NROLR2375XHZZ	1-6	AL		C
NROLR2408XHZZ	2-11	AD	N	C
NROLR2409XHZZ	2-22	AW	N	C
NROLR2410XHZZ	1-27	AP	N	C
NROLR2411XHZZ	4-11	AV	N	C
NSFTM2311XHZZ	1-28	AG	N	C
〃	2-23	AG	N	C
NSFTP2302XHZZ	1-7	AD	N	C
NSFTP2304XHZZ	2-24	AD	N	C
NSFTZ2257XHZZ	4-12	AG		C
[P]				
PCOVP2122XHZZ	1-48	AK	N	C
PCUSS2120XHZZ	1-89	AB	N	C
PGIDM2529XHZZ	1-40	AD	N	C
PGIDM2530XHZZ	1-41	AD	N	C
PGIDM2531XHZZ	1-36	AD	N	C
PGIDM2532XHZZ	1-37	AD	N	C
PGIDM2533XHSA	2-5	AD	N	C
PGIDM2533XHSC	2-5	AD	N	C
PGIDM2534XHSA	2-6	AD	N	C
PGIDM2534XHSC	2-6	AD	N	C
PGIDM2535XHSA	2-35	AC	N	C
PGIDM2535XHSC	2-35	AC	N	C
PGIDM2536FFZZ	4-13		N	C
PGIDM2537XHZZ	2-9	AF	N	C
PGIDM2538XHZZ	1-8	AM	N	C
PGUMR2160XHZZ	2-12	AE	N	C
PHOP-2101XHSA	2-33	AK	N	C
PHOP-2101XHSC	2-33	AH	N	C
PHOP-2102XHZZ	6-8	AE	N	C
PRBNN2015SCZZ	6-17	AQ	N	S
PSEL-2015SCZZ	2-30	AB		C
PSHEZ3293XHZZ	2-31	AH	N	C
PSHEZ3410FFZZ	1-87		N	C
PSHEZ3425XHZZ	1-97	AL	N	C
PSHEZ3428XHZZ	1-29	AE	N	C
PSHEZ3429XHZZ	1-90	AD	N	C
PSHEZ3431FFZZ	2-32		N	C
PSHEZ3432XHZZ	1-95	AE	N	C
PSHEZ3436XHZZ	1-100	AC	N	C
[Q]				
QACCE2013BMZZ	1-49			B
QCNCM2401SC0B	7-141	AA		C
QCNCM2442SC0B	7-134	AB		C
QCNCM2575SC0F	7-137	AE	N	C
QCNCM2575SC0I	7-140	AF	N	C
QCNCM2575SC1B	7-135	AF	N	C
QCNCM2575SC1D	7-135	AC	N	C
QCNCM7014SC0F	7-138	AB		C
QCNCM7014SC0G	7-133	AB		C
QCNCM7014SC1E	7-139	AC		C
QCNCM7014SC1F	7-142	AD		C
QCNCW2509SC0F	8-65	AD	N	C
〃	9-53	AD	N	C
QCNCW2509SC1B	9-52		N	C
QCNCW2509SC1D	8-64	AF	N	C
QCNW-217AXHZZ	1-2		N	C
〃	3-8		N	C
QCNW-3914BTZZ	6-25			C
QCNW-3976XHBG	6-14	AK	N	C
QCNW-3976XHOW	6-14	AK		C
QCNW-4416FFZZ	6-13			C
QCNW-4753XHZZ	8-3	AE		C
QCNW-4850XHZZ	1-42	AG		C
QCNW-4933XHZZ	5-28	AC	N	C
QCNW-4936XHZZ	1-38	AN	N	C
QCNW-4971XHZZ	1-50	AD	N	C
QJAKZ2069SCFB	8-66	AG	N	C
QJAKZ2069SCF0	9-54	AH	N	C
QJAKZ2070SC0D	8-63	AF		C
〃	9-51	AF		C
QSOCZ0115SC32	7-150	AC	N	C
QSW-F2224SCZZ	5-29	AE		B
QSW-M2259XHZZ	7-312	AF		B
QSW-Z2263XHZZ	8-190	AG		B
QSW-Z2264XHZZ	9-153			B
[R]				
RC-FZ2020SCZZ	8-7	AE		C
RC-FZ2022SCZZ	8-7	AD		C
〃	9-7	AD		C
RC-FZ2023SCZZ	8-6	AF		C
RC-FZ2025SCZZ	9-9	AE		C
RC-FZ3028SCZZ	8-7	AG		C
RCILF2125SCZZ	8-81	AD		C
RCILZ2104SCZZ	7-166	AK		C
RCILZ2144SCZZ	8-75	AC	N	C
〃	8-77	AC	N	C
〃	9-62	AC		C
〃	9-63	AC		C
RCILZ2145XHZZ	7-164	AF		C
〃	7-165	AF		C
〃	7-167	AF		C
〃	7-168	AF		C
RCORF2063XHZZ	1-98	AF		B
RCORF2064XHZZ	1-51	AF		B

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RCRSB0297AFZZ	7-315	AD		B
RCRSB2122SCZZ	7-314	AH		B
RCRSQ1005LCZZ	7-313	AE		B
RDENT2137XHZZ	1-88	BL	N	E
〃	10-901	BL	N	E
RFILN2027XHZZ	8-82	AC		C
〃	8-83	AC		C
〃	8-84	AC		C
〃	8-85	AC		C
〃	8-86	AC		C
〃	9-68	AC		C
〃	9-69	AC		C
〃	9-70	AC		C
〃	9-71	AC		C
〃	9-72	AC		C
〃	9-73	AC		C
〃	9-74	AC		C
〃	9-75	AC		C
RH-IX2129SCZZ	7-148	AY		B
RHEDZ2058XHZZ	1-39	BR	N	B
RMOTZ2145XHZZ	5-30	BA	N	B
RR-TZ3012SCJ0	7-308	AB	N	C
〃	7-310	AB	N	C
RR-TZ3017SCZZ	7-297	AC	N	C
〃	7-299	AC	N	C
〃	7-300	AC	N	C
〃	7-301	AC	N	C
〃	7-302	AC	N	C
〃	7-304	AC	N	C
〃	7-305	AC	N	C
〃	7-306	AC	N	C
〃	7-307	AC	N	C
RR-TZ3018SCZZ	7-298	AC	N	C
〃	7-303	AC	N	C
〃	7-309	AC	N	C
RRLYD3130SCZZ	7-311	AN		B
RRLYZ3427SCZZ	8-62	AN		B
〃	8-189	AN		B
〃	9-49	AN		B
〃	9-50	AN		B
RTRNI2142XHZZ	8-191	AR		B
〃	9-154	AR		B
RTRNZ2140XHZZ	9-155	AN		B
RUNTZ2037XHZZ	1-43	BL	N	B
[S]				
SPAKA480AFFZZ	6-12		N	D
SPAKA481AFFZZ	6-11		N	D
SPAKA489AFFZZ	6-10		N	D
SPAKA490AFFZZ	6-9		N	D
SPAKC031BFFZZ	6-1		N	D
SPAKC052BFFZZ	6-1		N	D
SPAKP3386FFZZ	6-18		N	D
[T]				
TCADZ2796FFZZ	6-21		N	D
TCADZ2797FFZZ	6-21		N	D
TINSF3976FFZZ	6-3		N	D
TINSG3974FFZZ	6-3		N	D
TINSS3977FFZZ	6-3		N	D
TINSW3975FFZZ	6-3		N	D
TLABH218AFFZZ	6-23		N	D
TLABH219AFFZZ	6-24		N	D
TLABH4751FFZZ	6-4		N	D
TLABH4752FFZZ	6-6		N	D
TLABH4811FFZZ	6-4		N	D
TLABH4835FFZZ	6-23		N	D
TLABH4880FFZZ	6-4		N	D
TLABH4899FFZZ	6-24		N	D
TLABH4938FFZZ	6-4		N	D
TLABM229AFFZZ	6-22		N	D
TLABM230AFFZZ	6-22		N	D
TLABM231AFFZZ	6-22		N	D
TLABM232AFFZZ	6-22		N	D
TLABM4928FFZZ	6-2		N	D
TLABM4972FFZZ	6-2		N	D
[U]				
UBATL2049SCZZ	7-1	AF		B
[V]				
VCCCTV1HH101J	7-93	AA		C
〃	7-94	AA		C
〃	7-97	AA		C

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VCCCTV1HH101J	7-99	AA		C
〃	7-101	AA		C
〃	7-103	AA		C
〃	7-123	AA		C
〃	7-124	AA		C
〃	7-125	AA		C
〃	7-126	AA		C
〃	7-130	AA		C
〃	8-43	AA		C
VCCCTV1HH150J	7-20	AA		C
〃	7-23	AA		C
〃	7-34	AA		C
VCCCTV1HH180J	7-28	AA		C
VCCCTV1HH220J	7-70	AA		C
〃	7-90	AA		C
VCCCTV1HH680J	7-21	AA		C
〃	7-22	AA		C
〃	7-32	AA		C
〃	7-37	AA		C
〃	7-38	AA		C
〃	7-47	AA		C
〃	7-50	AA		C
〃	7-51	AA		C
〃	7-57	AA		C
〃	7-73	AA		C
〃	7-74	AA		C
〃	7-75	AA		C
〃	7-76	AA		C
〃	7-91	AA		C
〃	7-92	AA		C
〃	7-95	AA		C
〃	7-96	AA		C
〃	7-106	AA		C
〃	7-116	AA		C
〃	7-117	AA		C
〃	7-118	AA		C
VCCSTV1HL102J	7-83	AA		C
〃	7-87	AA		C
VCCSTV1HL391J	7-31	AA		C
VCEAEA1EW476M	9-14	AB		C
VCEAEA1HW106M	9-15	AA		C
〃	9-16	AA		C
VCEAEA1HW226M	9-13	AB		C
VCEAGA1EW107M	8-14	AB		C
VCEAGA1EW476M	7-2	AA		C
〃	7-4	AA		C
〃	7-9	AA		C
〃	8-16	AA		C
〃	8-18	AA		C
〃	8-20	AA		C
〃	9-8	AA		C
〃	9-11	AA		C
〃	9-12	AA		C
VCEAGA1HW105M	7-3	AB		C
VCEAGA1HW106M	7-5	AA		C
〃	7-6	AA		C
〃	8-11	AA		C
〃	8-12	AA		C
〃	8-13	AA		C
〃	8-19	AA		C
VCEAGA1HW107M	7-8	AA		C
VCEAGA1HW225M	8-15	AA		C
VCEAGA1HW226M	7-7	AB		C
〃	8-17	AB		C
〃	9-5	AB		C
VCEAGA1HW335M	8-4	AB		C
〃	9-3	AB		C
VCEAGA1HW475M	8-4	AA		C
〃	8-21	AA		C
〃	9-10	AA		C
VCEAGA2AW225M	9-4	AC		C
VCKYPU1HB102K	9-17	AA		C
VCKYTQ1EB105K	8-60	AD		C
VCKYTQ1HB102K	9-23	AA		C
VCKYTQ1HB103K	9-30	AA		C
VCKYTQ1HB104K	8-36	AB		C
VCKYTQ1HB183K	8-39	AA		C
〃	9-27	AA		C
VCKYTQ1HB223K	9-19	AB		C
VCKYTQ1HB333K	8-57	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VCKYTQ1HB392K	8-39	AB		C
VCKYTQ1HB393K	8-36	AA		C
VCKYTQ1HB473K	8-22	AA		C
〃	8-36	AA		C
〃	9-18	AA		C
〃	9-20	AA		C
〃	9-33	AA		C
VCKYTQ1HB563K	8-39	AA		C
VCKYTQ1HB683K	8-57	AB		C
VCKYTQ1HF104Z	7-88	AA		C
〃	7-104	AA		C
VCKYTV1CF105Z	7-10	AB		C
〃	7-24	AB		C
〃	7-29	AB		C
〃	7-35	AB		C
〃	7-40	AB		C
〃	7-41	AB		C
〃	7-46	AB		C
〃	7-48	AB		C
〃	7-53	AB		C
〃	7-54	AB		C
〃	7-55	AB		C
〃	7-56	AB		C
〃	7-64	AB		C
〃	7-66	AB		C
〃	7-67	AB		C
〃	7-68	AB		C
〃	7-71	AB		C
〃	7-72	AB		C
〃	7-77	AB		C
〃	7-80	AB		C
〃	7-81	AB		C
〃	7-82	AB		C
〃	7-85	AB		C
〃	7-89	AB		C
〃	7-102	AB		C
VCKYTV1EB104K	7-39	AA		C
〃	7-59	AA		C
〃	7-63	AA		C
〃	7-100	AA		C
〃	8-32	AA		C
〃	8-33	AA		C
〃	8-59	AA		C
〃	9-31	AA		C
〃	9-36	AA		C
〃	9-38	AA		C
〃	9-43	AA		C
VCKYTV1EF104Z	7-11	AA		C
〃	7-15	AA		C
〃	7-16	AA		C
〃	7-25	AA		C
〃	7-45	AA		C
〃	7-52	AA		C
〃	7-65	AA		C
〃	7-79	AA		C
〃	7-105	AA		C
〃	7-119	AA		C
〃	7-120	AA		C
〃	7-131	AA		C
〃	7-132	AA		C
〃	8-31	AA		C
〃	8-49	AA		C
〃	8-52	AA		C
〃	8-53	AA		C
〃	8-54	AA		C
〃	9-24	AA		C
〃	9-29	AA		C
〃	9-32	AA		C
〃	9-40	AA		C
VCKYTV1HB102K	7-13	AA		C
〃	7-33	AA		C
〃	7-42	AA		C
〃	7-43	AA		C
〃	7-44	AA		C
〃	7-49	AA		C
〃	7-58	AA		C
〃	7-78	AA		C
〃	7-107	AA		C
〃	7-108	AA		C
〃	7-109	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VCKYTV1HB102K	7-110	AA		C
〃	7-111	AA		C
〃	7-112	AA		C
〃	7-113	AA		C
〃	7-114	AA		C
〃	7-115	AA		C
〃	7-121	AA		C
〃	7-122	AA		C
〃	7-127	AA		C
〃	7-128	AA		C
〃	7-129	AA		C
〃	7-208	AA		C
〃	7-211	AA		C
〃	8-27	AA		C
〃	8-42	AA		C
〃	8-46	AA		C
〃	8-55	AA		C
〃	9-21	AA		C
〃	9-41	AA		C
〃	9-45	AA		C
VCKYTV1HB103K	7-30	AB		C
〃	7-62	AB		C
〃	8-50	AB		C
〃	9-22	AB		C
〃	9-42	AB		C
〃	9-46	AB		C
VCKYTV1HB121K	9-37	AA		C
VCKYTV1HB122K	9-25	AB		C
VCKYTV1HB152K	8-47	AA		C
〃	9-28	AA		C
VCKYTV1HB221K	7-60	AA		C
〃	8-29	AA		C
VCKYTV1HB222K	7-12	AA		C
〃	7-14	AA		C
〃	7-17	AA		C
〃	7-18	AA		C
〃	7-19	AA		C
〃	7-26	AA		C
〃	7-27	AA		C
〃	7-36	AA		C
〃	7-69	AA		C
〃	8-25	AA		C
〃	8-26	AA		C
〃	8-34	AA		C
VCKYTV1HB223K	8-30	AA		C
〃	8-51	AA		C
VCKYTV1HB331K	9-34	AA		C
〃	9-35	AA		C
VCKYTV1HB333K	9-44	AA		C
〃	9-47	AA		C
VCKYTV1HB392K	8-27	AA		C
VCKYTV1HB471K	8-34	AA		C
VCKYTV1HB472K	7-61	AA		C
〃	8-23	AA		C
〃	8-43	AA		C
〃	9-26	AA		C
VCKYTV1HB473K	8-23	AA		C
VCKYTV1HB561K	8-55	AA		C
VCKYTV1HB681K	7-84	AA		C
〃	8-43	AA		C
VCKYTV1HB822K	8-47	AA		C
VCKYTV1HF223Z	9-39	AA		C
〃	9-48	AA		C
VCQYNA1HM334K	8-10	AD		C
VCQYNA1HM473K	9-6	AA		C
VHDDSS131//-1	8-67	AA		B
〃	8-68	AA		B
〃	8-69	AA		B
〃	9-55	AA		B
VHDDSS133//-1	8-70	AA		B
〃	8-71	AA		B
〃	9-56	AA		B
〃	9-57	AA		B
VHDRB705D//-1	7-144	AD		B
VHDS1ZB60//-1	8-188	AC		B
VHD0R5G4B42-1S	9-152	AF		B
VHD1SS355//-1	7-145	AB		B
〃	7-146	AB		B
VHEBZX79B10/A	9-161	AC	N	B
VHEBZX79B2V4A	8-206			B

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VHEBZX79B2V4A	8-207			B
VHEBZX79B20/A	8-193	AC		B
〃	8-196	AC		B
VHEBZX79B24/A	9-158			B
VHEBZX79B27/A	8-193	AC		B
〃	8-196	AC		B
VHEBZX79B3V3A	8-200			B
〃	8-202			B
VHEBZX79B30/A	8-193	AC		B
〃	8-199	AC		B
VHEBZX79B4V7A	8-200			B
〃	8-202			B
VHEBZX79B5V6A	9-157			B
VHEBZX79B6V8A	8-198			B
VHEHZ2A1///-1	8-204	AC		B
〃	8-205	AC		B
〃	9-159	AC		B
〃	9-160	AC		B
〃	9-162	AC		B
〃	9-163	AC		B
〃	9-164	AC		B
〃	9-165	AC		B
VHEMPZP4748A1	7-143	AA		B
VHIHCF4053M1T	7-160	AG		B
VHIMC34119DR2	7-159	AH		B
VHINJM2902M-1	7-161	AF		B
VHINJM2904M-2	8-72	AG		B
〃	8-73	AG		B
〃	8-74	AG		B
〃	9-59	AG		B
〃	9-60	AG		B
VHIPST596CMT1	7-157	AF		B
VHIR96CIDFC1M	7-155	BN	N	B
〃	7-158	BN	N	B
VHITC74HCU04F	7-156	AE	N	B
VHITEA1062A-1	9-58	AR		B
VHIULN2003ANS	7-154	AE		B
VHIW24258S7LE	7-149	AQ	N	B
VHI27020FLL0B	7-150		N	B
VHI27020FLM0C	7-150		N	B
VHI27020FLW0D	7-150		N	B
VHI27020FMG0B	7-150		N	B
VHI27020FML0B	7-150		N	B
VHPSG206S//-1	7-171	AG		B
〃	8-92	AG		B
〃	8-93	AG		B
〃	9-82	AG		B
〃	9-83	AG		B
VHPTLP521-1BL	8-90	AE		B
〃	8-91	AE		B
〃	9-76	AE		B
〃	9-78	AE		B
〃	9-79	AE		B
〃	9-80	AE		B
〃	9-81	AE		B
VHPTLP627//-1	8-87	AH		B
〃	8-88	AH		B
〃	8-89	AH		B
〃	9-77	AH		B
VHVDSS301L/-U	8-192	AF		B
VHVICPS07//-1	7-147	AA		B
VHVRA501PV6-1	8-1	AE		B
〃	8-2	AE		B
〃	9-1	AE		B
〃	9-2	AE		B
VHVTN07G101-1	9-156	AB		B
VRD-HT2HY153J	8-106	AB		C
VRD-HT2HY200J	9-94	AA		C
VRD-HT2HY223J	8-106	AA		C
VRD-HT2HY433J	9-95	AA		C
VRD-HT2HY513J	8-106	AA		C
VRS-HT3AA333J	9-96	AA		C
VRS-HT3DA470J	8-105	AA		C
VRS-TP2BD000J	8-60	AA		C
VRS-TP2BD100J	8-120	AA		C
VRS-TP2BD150J	8-115	AA		C
〃	8-120	AA		C
VRS-TP2BD200J	9-115	AA		C
VRS-TP2BD300J	8-115	AA		C
VRS-TP2BD301J	8-114	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-TP2BD390J	8-115	AA		C
VRS-TS2AD000J	7-85	AA		C
〃	7-98	AA		C
〃	7-163	AA		C
〃	7-169	AA		C
〃	7-170	AA		C
〃	7-180	AA		C
〃	7-182	AA		C
〃	7-183	AA		C
〃	7-207	AA		C
〃	7-210	AA		C
〃	7-245	AA		C
〃	7-249	AA		C
〃	7-260	AA		C
〃	7-261	AA		C
〃	7-266	AA		C
〃	7-282	AA		C
〃	7-290	AA		C
〃	7-292	AA		C
〃	7-294	AA		C
〃	8-76	AA		C
〃	8-78	AA		C
〃	8-79	AA		C
〃	8-80	AA		C
〃	8-111	AA		C
〃	8-113	AA		C
〃	8-122	AA		C
〃	8-123	AA		C
〃	8-124	AA		C
〃	8-134	AA		C
〃	8-158	AA		C
〃	8-161	AA		C
〃	8-173	AA		C
〃	8-183	AA		C
〃	9-61	AA		C
〃	9-64	AA		C
〃	9-65	AA		C
〃	9-66	AA		C
〃	9-67	AA		C
〃	9-100	AA		C
〃	9-109	AA		C
〃	9-111	AA		C
〃	9-114	AA		C
〃	9-134	AA		C
〃	9-146	AA		C
VRS-TS2AD100J	8-150	AA		C
〃	8-187	AA		C
〃	9-151	AA		C
VRS-TS2AD101J	7-215	AA		C
〃	7-216	AA		C
〃	7-232	AA		C
〃	7-255	AA		C
〃	7-257	AA		C
〃	7-258	AA		C
〃	7-293	AA		C
VRS-TS2AD102J	7-222	AA		C
〃	7-237	AA		C
〃	7-243	AA		C
〃	7-259	AA		C
〃	7-261	AA		C
〃	7-265	AA		C
〃	7-279	AA		C
〃	8-128	AA		C
〃	8-147	AA		C
〃	8-163	AA		C
〃	9-148	AA		C
〃	9-150	AA		C
VRS-TS2AD103J	7-177	AA		C
〃	7-187	AA		C
〃	7-203	AA		C
〃	7-218	AA		C
〃	7-231	AA		C
〃	7-256	AA		C
〃	7-271	AA		C
〃	7-287	AA		C
〃	7-296	AA		C
〃	8-118	AA		C
〃	8-125	AA		C
〃	8-127	AA		C
〃	8-136	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD103J	8-168	AA		C
VRS-TS2AD104J	7-191	AA		C
〃	7-235	AA		C
〃	7-240	AA		C
〃	8-149	AA		C
〃	9-97	AA		C
〃	9-120	AA		C
〃	9-121	AA		C
〃	9-137	AA		C
〃	9-149	AA		C
VRS-TS2AD105J	7-195	AA		C
〃	9-104	AA		C
VRS-TS2AD106J	7-277	AA		C
VRS-TS2AD121J	7-162	AA		C
〃	7-197	AA		C
〃	7-278	AA		C
VRS-TS2AD122J	9-147	AA		C
VRS-TS2AD123J	8-159	AA		C
VRS-TS2AD124J	8-109	AA		C
〃	8-169	AA		C
〃	9-112	AA		C
VRS-TS2AD131J	8-135	AA		C
〃	9-141	AA		C
VRS-TS2AD133J	7-269	AA		C
〃	8-125	AA		C
VRS-TS2AD134J	8-169	AA		C
〃	9-99	AA		C
VRS-TS2AD151J	7-200	AA		C
〃	7-201	AA		C
〃	7-204	AA		C
〃	7-212	AA		C
〃	7-214	AA		C
〃	8-142	AA		C
VRS-TS2AD152J	7-264	AA		C
〃	8-145	AA		C
VRS-TS2AD153J	9-113	AA		C
VRS-TS2AD163J	8-159	AA		C
VRS-TS2AD182J	8-155	AA		C
VRS-TS2AD201J	7-196	AG		C
VRS-TS2AD203J	7-233	AA		C
〃	7-242	AA		C
〃	7-244	AA		C
〃	7-274	AA		C
〃	7-283	AA		C
〃	7-284	AA		C
〃	8-143	AA		C
〃	9-122	AA		C
〃	9-126	AA		C
〃	9-127	AA		C
〃	9-130	AA		C
〃	9-135	AA		C
〃	9-138	AA		C
〃	9-140	AA		C
VRS-TS2AD220J	9-105	AA		C
VRS-TS2AD221J	7-289	AA		C
〃	8-140	AA		C
VRS-TS2AD223J	7-184	AA		C
〃	7-223	AA		C
〃	8-147	AA		C
〃	8-152	AA		C
〃	8-153	AA		C
〃	8-154	AA		C
VRS-TS2AD224J	7-241	AA		C
〃	7-276	AA		C
〃	9-107	AA		C
VRS-TS2AD241J	9-123	AA		C
VRS-TS2AD243J	8-176	AA		C
VRS-TS2AD271J	7-178	AA		C
〃	7-181	AA		C
〃	7-185	AA		C
〃	7-186	AA		C
〃	7-193	AA		C
〃	7-194	AA		C
〃	7-199	AA		C
〃	7-206	AA		C
〃	7-220	AA		C
〃	7-221	AA		C
〃	7-295	AA		C
〃	9-101	AA		C
VRS-TS2AD273J	8-118	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD273J	8-129	AA		C
〃	9-116	AA		C
〃	9-119	AA		C
VRS-TS2AD3R0J	7-224	AA		C
VRS-TS2AD302J	7-239	AA		C
〃	7-288	AA		C
〃	8-163	AA		C
VRS-TS2AD303J	7-190	AA		C
〃	7-192	AA		C
〃	7-219	AA		C
〃	7-226	AA		C
〃	7-228	AA		C
〃	7-229	AA		C
〃	7-236	AA		C
〃	7-253	AA		C
〃	7-254	AA		C
〃	7-291	AA		C
〃	8-129	AA		C
〃	8-166	AA		C
〃	8-172	AA		C
〃	8-174	AA		C
〃	8-185	AA		C
〃	9-129	AA		C
VRS-TS2AD331J	8-111	AA		C
〃	8-161	AA		C
VRS-TS2AD332J	7-225	AA		C
〃	7-286	AA		C
〃	8-179	AA		C
〃	8-184	AA		C
〃	9-142	AA		C
〃	9-143	AA		C
VRS-TS2AD333J	7-198	AA		C
〃	7-247	AA		C
〃	7-248	AA		C
〃	7-275	AA		C
〃	8-129	AA		C
〃	8-146	AA		C
〃	8-166	AA		C
〃	8-176	AA		C
〃	8-180	AA		C
VRS-TS2AD362J	9-144	AA		C
VRS-TS2AD363J	9-131	AA		C
VRS-TS2AD392J	7-279	AA		C
〃	9-98	AA		C
VRS-TS2AD393J	7-188	AA		C
〃	7-189	AA		C
〃	8-176	AA		C
〃	9-133	AA		C
VRS-TS2AD431J	9-128	AA		C
VRS-TS2AD433J	8-109	AA		C
〃	9-117	AA		C
VRS-TS2AD471J	7-213	AA		C
〃	7-217	AA		C
〃	7-227	AA		C
〃	7-230	AA		C
〃	7-238	AA		C
〃	7-250	AA		C
〃	7-251	AA		C
〃	7-252	AA		C
〃	8-138	AA		C
〃	8-139	AA		C
〃	8-140	AA		C
〃	9-125	AA		C
〃	9-139	AA		C
VRS-TS2AD472J	9-110	AA		C
VRS-TS2AD473J	7-246	AA		C
〃	7-266	AA		C
〃	8-174	AA		C
VRS-TS2AD474J	7-234	AA		C
VRS-TS2AD512J	7-179	AA		C
〃	7-273	AA		C
VRS-TS2AD513J	8-132	AA		C
〃	8-133	AA		C
VRS-TS2AD514J	8-137	AG		C
〃	8-182	AG		C
VRS-TS2AD560J	9-124	AA		C
VRS-TS2AD561J	9-103	AA		C
VRS-TS2AD562J	7-205	AA		C
VRS-TS2AD563J	8-185	AA		C
VRS-TS2AD621J	8-151	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD621J	9-106	AA		C
〃	9-108	AA		C
〃	9-132	AA		C
VRS-TS2AD623J	8-180	AA		C
〃	9-136	AA		C
VRS-TS2AD680J	7-202	AA		C
VRS-TS2AD681J	9-102	AA		C
VRS-TS2AD683J	8-169	AA		C
VRS-TS2AD753J	9-118	AA		C
VRS-TS2AD821J	8-155	AA		C
VRS-TS2AD822J	8-144	AA		C
VRS-TS2AD911J	8-155	AA		C
〃	8-163	AA		C
VRSTS2AD1183F	7-263	AA		C
〃	7-279	AA		C
VRSTS2AD1742F	7-268	AA		C
〃	7-269	AA		C
VRSTS2AD3651F	9-145	AA		C
VRSTS2AD4752F	7-209	AA		C
VRSTS2AD8662F	7-272	AA		C
〃	7-285	AA		C
VSBS108////-1	8-94	AE		B
VSBUK554-200A	9-85	AM		B
VSDTC114EK/-1	7-173	AB		B
〃	7-174	AB		B
〃	8-95	AB		B
〃	8-96	AB		B
〃	8-100	AB		B
〃	8-101	AB		B
〃	8-102	AB		B
〃	8-103	AB		B
〃	8-104	AB		B
〃	9-88	AB		B
〃	9-89	AB		B
〃	9-90	AB		B
〃	9-91	AB		B
〃	9-92	AB		B
〃	9-93	AB		B
VSDTD114EK/-1	7-175	AC		B
VS2SA1037KS-1	7-172	AB		B
〃	7-176	AB		B
VS2SA1807-P-1	9-84	AE		B
VS2SC2412KR-1	8-97	AD		B
〃	9-87	AD		B
VS2SC4061K/-1	9-86	AC		B
VS2SJ106GR/-1	8-98	AD		B
〃	8-99	AD		B
[X]				
XBBSD30P06000	1-B3	AA		C
XBPSD30P06K00	1-B8	AA		C
XBPSN40P06K00	1-B4	AA		C
XEBSD20P06000	3-B1	AA		C
XEBSD30P08000	1-B7	AA		C
XEBSD30P10000	1-B2	AA		C
〃	2-B2	AA		C
〃	5-B2	AA		C
XHBSD30P05000	1-B5	AA		C
[0]				
0CBLRZ6562ZN/	10-31	AQ	N	C
0CBLRZ6581ZN/	10-30	AQ	N	C
0CBPJCEJ1601/	10-24	AH	N	A
〃	10-25	AH	N	A
0CBPKZ0194ZZ/	10-16	AC		C
0CBPZZ0906ZZ/	10-26	AH		A
0CBPZZ0931ZZ/	10-15	AH	N	C
0CBUAC0034EZ/	10-36	AE		B
〃	10-37	AE		B
0CBUAC0264AZ/	10-35	AD		B
0CBUAC0284BK/	10-38	AF	N	B
〃	10-39	AF	N	B
0CBUAG0161AC/	10-34	AQ	N	B
0CBUBA0011AL/	10-21	AD	N	B
0CBUBC0125DK/	10-17	AD	N	B
〃	10-18	AD	N	B
〃	10-19	AD	N	B
〃	10-20	AD	N	B
0CBUBC0302BZ/	10-23	AE		B
0CBUBC0336AZ/	10-22	AL		B
0CBUBDBE2R0C/	10-65	AD	N	B
0CBUBDBE200D/	10-66	AD	N	B

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
0CBUBDBE270D/	10-64	AD	N	B
0CBUBDBE6R2C/	10-68	AC		B
0CBUBDBM300D/	10-67	AC		B
0CBUCB0167AZ/	10-27	AR		B
0CBUDC0163CZ/	10-32	AG	N	B
〃	10-33	AG	N	B
0CBUDC0232AK/	10-61	AF	N	B
0CBUEEB101CT/	10-43	AC		C
0CBUEEB152CT/	10-44	AC	N	C
0CBUEEB223CT/	10-45	AC		C
0CBUEEB242CT/	10-54	AC		C
0CBUEEB330CT/	10-46	AC	N	C
0CBUEEB334CT/	10-51	AC		C
0CBUEEB390CT/	10-50	AC	N	C
0CBUEEB392CT/	10-55	AC		C
0CBUEEB471CT/	10-48	AC		C
0CBUEEB472CT/	10-52	AC		C
〃	10-56	AC		C
〃	10-57	AC		C
0CBUEEB473CT/	10-47	AC	N	C
0CBUEEB682CT/	10-53	AC		C
0CBUEEB824CF/	10-41	AC	N	C
〃	10-42	AC	N	C
0CBUEEC272CF/	10-58	AC	N	C
〃	10-59	AC	N	C
0CBUEEC335CF/	10-40	AC	N	C
0CBUEFDR33DB/	10-49	AE	N	C
0CBUEZ0507ZZ/	10-62	AD		B
0CBUFBA471DB/	10-63	AD		B
0CBUGAB101RV/	10-13	AF	N	C
0CBUGAE331TS/	10-7	AH	N	C
0CBUGCF104CQ/	10-10	AD	N	C
0CBUGCM332BJ/	10-6	AF	N	C
0CBUGCS101AA/	10-11	AD	N	C
0CBUGFF102BQ/	10-14	AD	N	C
0CBUGFF223JS/	10-5	AC	N	C
0CBUGFF472BQ/	10-4	AC	N	C
0CBUGFF474JA/	10-8	AF	N	C
0CBUGFM104KD/	10-12	AF	N	C
0CBUGFM224KR/	10-1	AF	N	C
0CBUGZ1186ZZ/	10-2	AL	N	C
0CBUGZ1187ZZ/	10-3	AD	N	C
0CBUGZ1188ZZ/	10-9	AK	N	C
0CBUKZ0826ZZ/	10-28	AK		C
0CBUZZ0156ZZ/	10-29	AN	N	C
0CB829585032/	10-60	BE	N	B

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK

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